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The Dental Line DIGIDENT
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PcCR 1417 ACL4 System

(AA095042-00)

Automatic Cassette Loading Version

Service Manual

Catalog number: AT095005-02

September, 2003 Ver. 01

OREX Distributed Computed Radiography

OREX Ltd. is a market innovator in the field of portable Computed Radiography Technologies—designed and priced for low-volume clinic or field unit needs.

Founded in 1995 under the name of Digident, the company initially entered the market of desktop dental radiography providing high quality, portable CR reading units for dental and orthodontic professionals around the world. The secret of Digident/OREX's rapid success lies in *the best cost-performance ratio on the market*.

OREX designs, manufactures and markets phosphor image laser scanners. These units replace the traditional x-ray film and light box. The scanners allow the user to immediately read the x-ray image from the phosphor plate, and transfer it to a DICOM 3 compatible digital computer file. Once transferred, users can manipulate the digital image for close-up screening, or transmit it for long-distance consultation. After each scan, the phosphor plates are automatically erased by the unit, ready for re-use.

OREX provides clients with a full solution including phosphor image plates, laser readers, software for image processing, storage, retrieval and communication in Picture Archiving and Communications System (PACS) compatible format.

The company's mission is to become a leading provider of compact personal CR systems. Following the successful penetration of the global dental market, the company changed its name from Digident to OREX and expanded its markets and product lines to serve the *dental, medical, military, industrial and veterinary* fields.

"We are committed to assisting our customers in obtaining maximum value from OREX products by providing excellent support at exceptional value."

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Safety

Laser Safety Instructions

1. During nominal operation, the scanner is closed and sealed with a protective cover. That is for preventing the laser from being exposed to the outside area, and to prevent access to the laser by the user.
2. During nominal operation, the cover should not be removed. Removing the cover shall be done only for service purposes, and by a qualified technician for service operations.
3. Any service operation shall be done without activating the laser unit. Disconnecting the relevant connector on the laser board will disconnect the power supply to the laser, and deactivate the laser unit for service operations.
4. In case the laser must be operated during service operation, the service technician shall make sure that the optical unit is located within the cylinder area, where the laser beam is blocked and cannot leak outside.
5. When a service operation is taking place, with cover removed and laser activated, **avoid** direct exposure to the laser beam.

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1. Terms and Conventions

Term	Meaning
FSE	Field Service Engineer
PSP	Photo-Stimulate Plate
USB	Universal Serial Bus
PM	Photo multiplayer

2. Required Tools for FSE

- Philips screw driver PH2
- Open end spanner 7.0mm
- Hexagon (Allan) key 1.5mm
- Hexagon (Allan) key 2.0mm
- Hexagon (Allan) key 3.0mm
- Hexagon (Allan) key 4.0mm
- Sharp nose pliers
- Electronic Side cutters

3. Component Description

3.1 General

The PcCR 1417 consists of 16 major assemblies, which can be replaced in the field in case of malfunction.

USB BOARD

MOTION BOARD

SENSOR BOARD

PM + PM BOARD

LASER BOARD

ROLLER MOTOR

STEP MOTOR SLIDE

STEP MOTOR CARRIAGE

POWER SUPPLY ASSEMBLY

ERASE LAMPS SENSORS

L-ORIGIN SENSOR

R – ORIGIN SENSOR

PLATE SIZE SENSOR

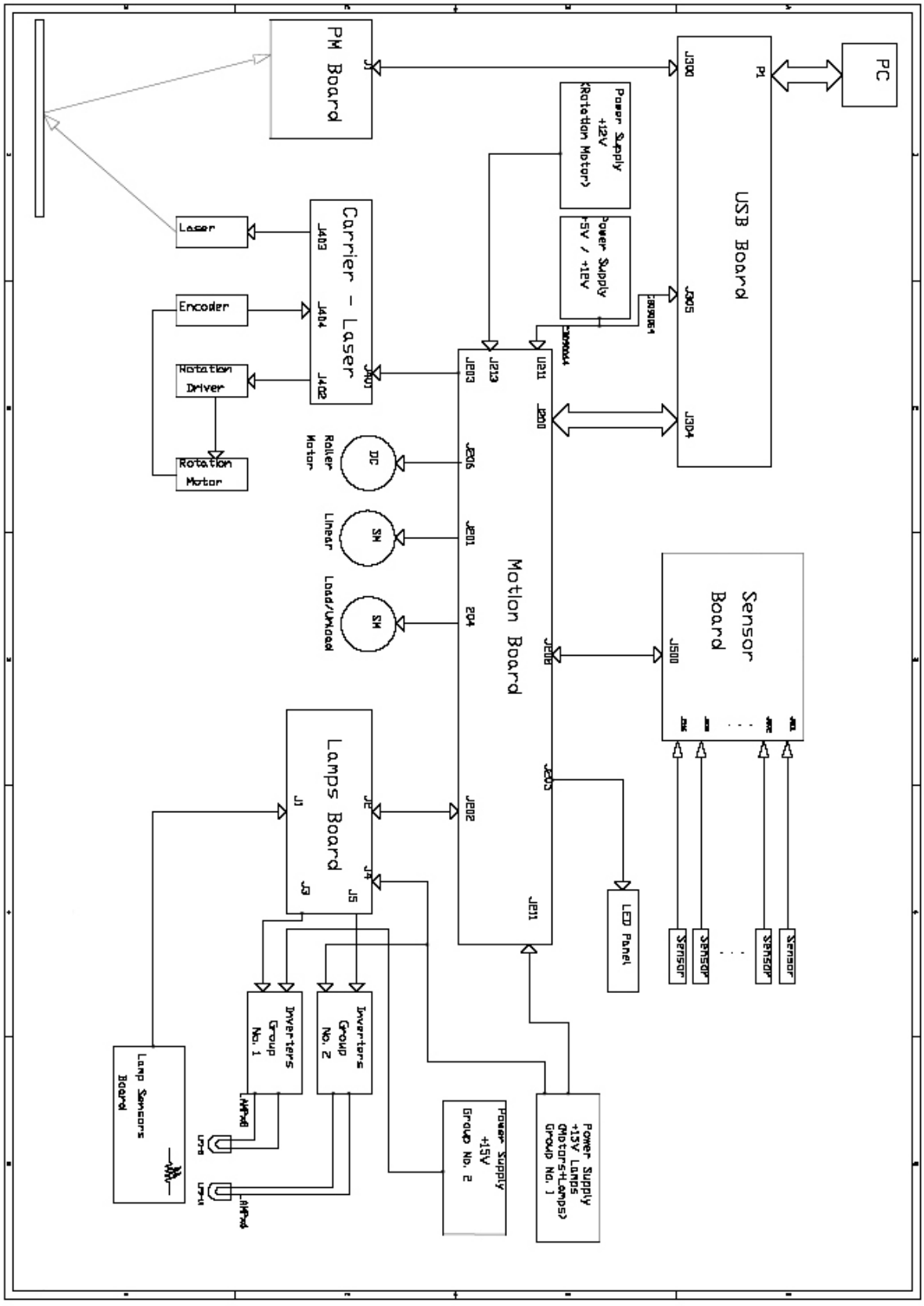
ROLLERS SENSOR

ERASE LAMPS

INVERTERS ASSEMBLY

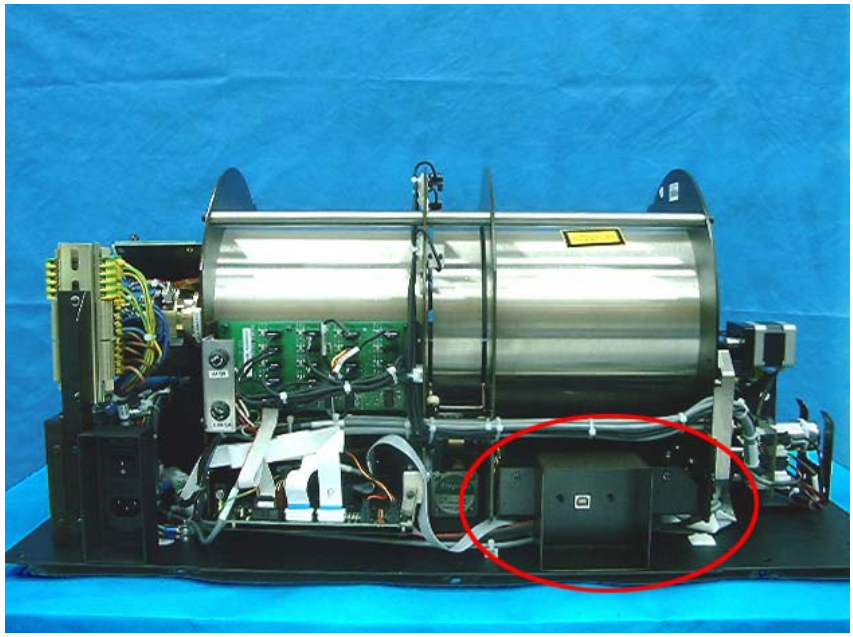
This chapter includes description for each part,
including its location and wiring.

3.2 System Block Diagram

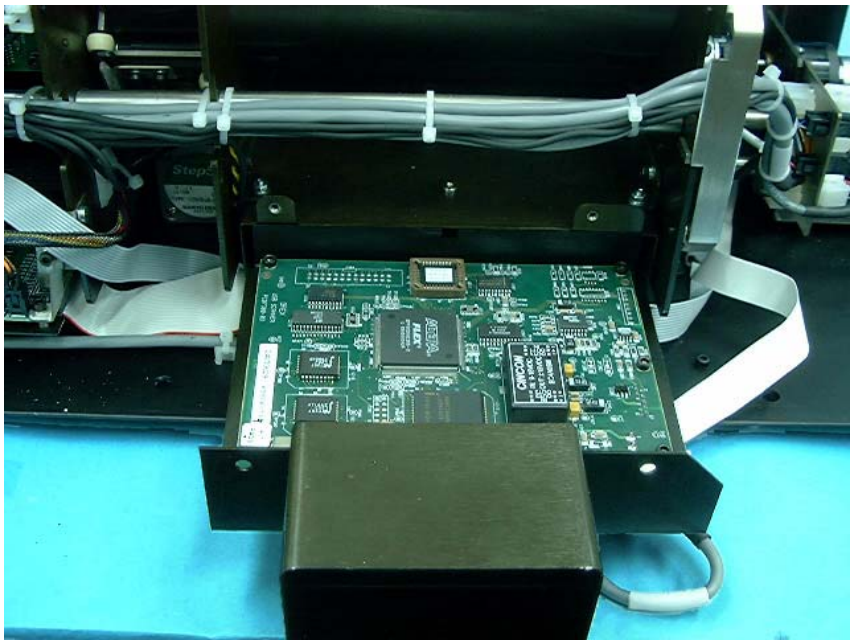


3.3 USB Board

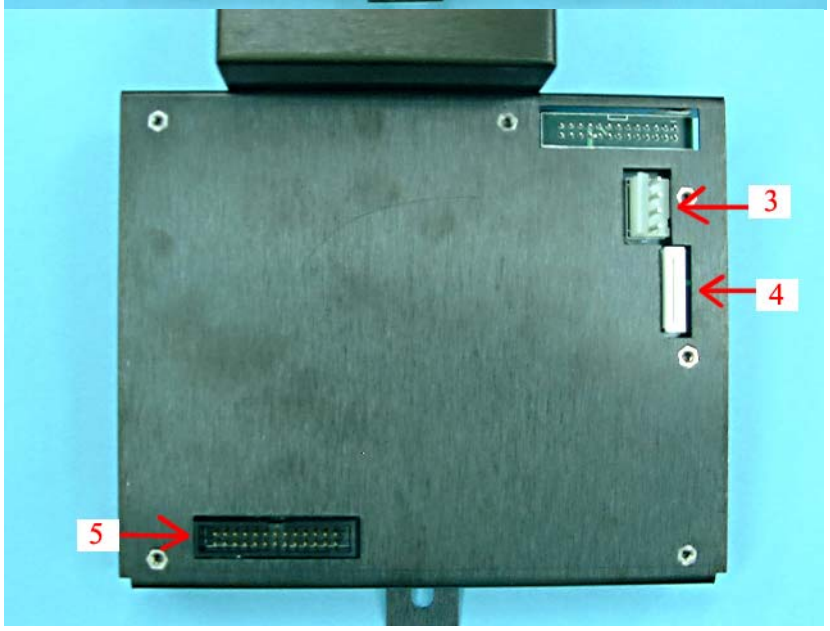
3.3.1 Location



3.3.2 Component



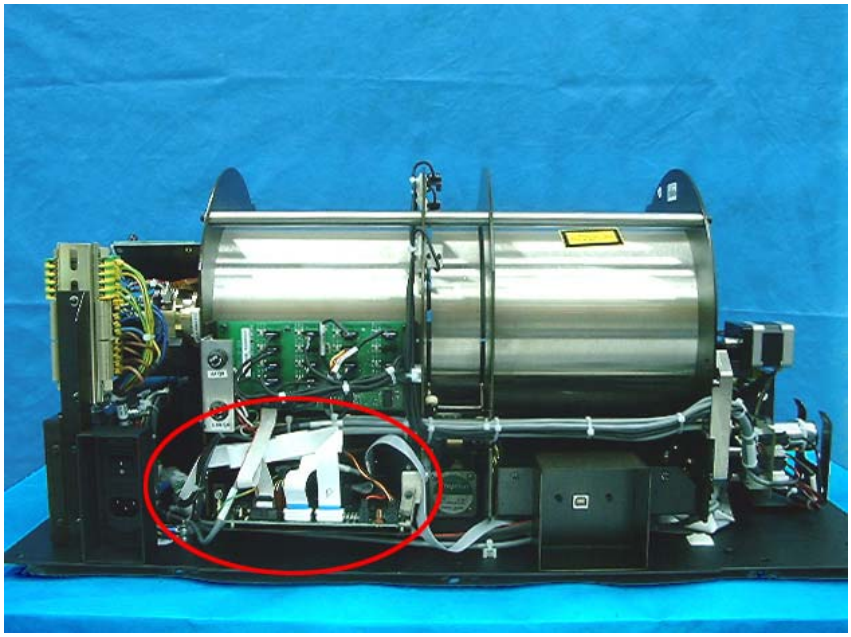
3.3.3 Description



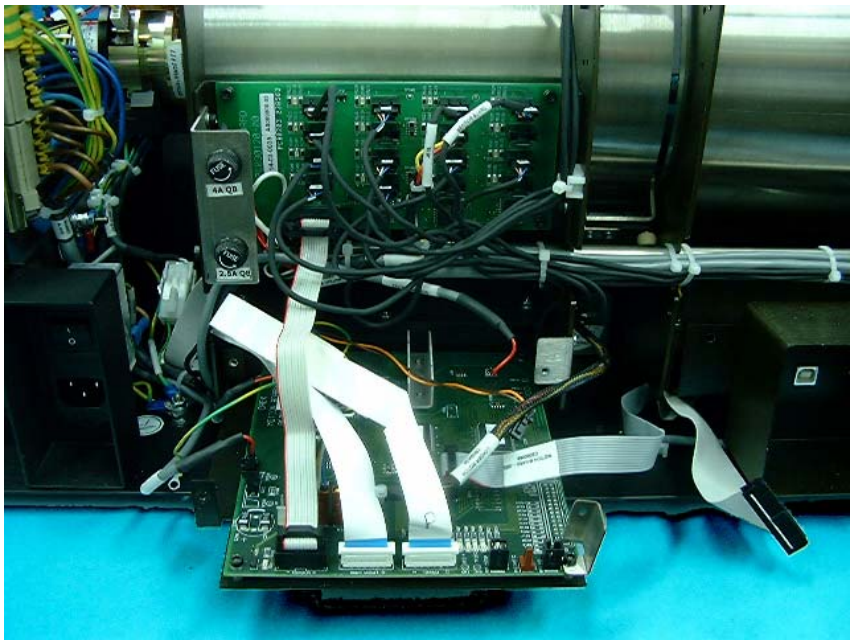
Connector 1	**Destination: USB connector on pc.**		
Connector 2	**Serial EPROM**		
Connector 3 J305	**Destination: 5v/12v power supply.**		
	1	Red	5v
	3	Black	GND
	4	Yellow	12v
Connector 4 J300	**Destination: flat cable to J1 on pm card.**		
Connector 5 J304	**Destination: flex cable to J200 on motion card.**		

3.4 Motion Board

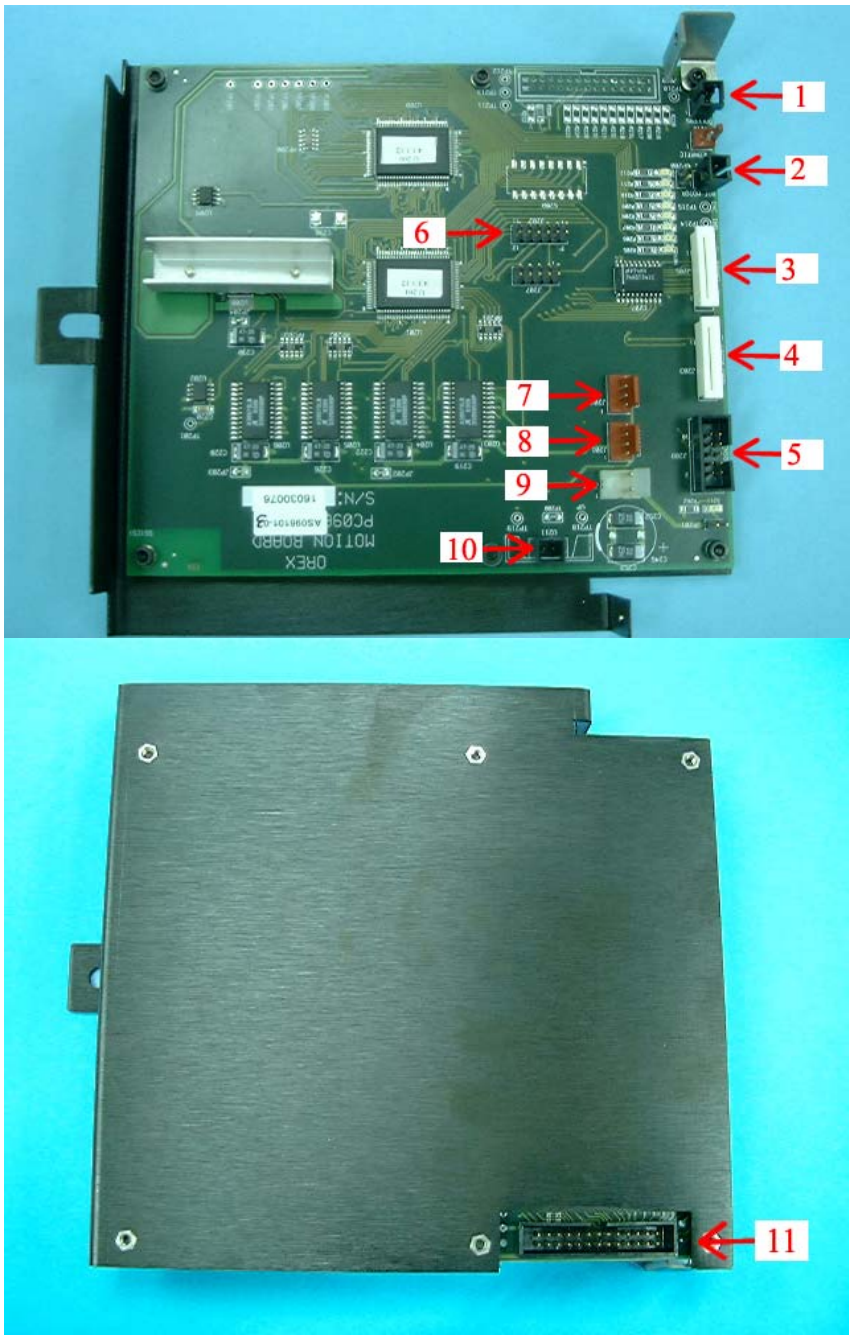
3.4.1 Location



3.4.2 Component



3.4.3 Description

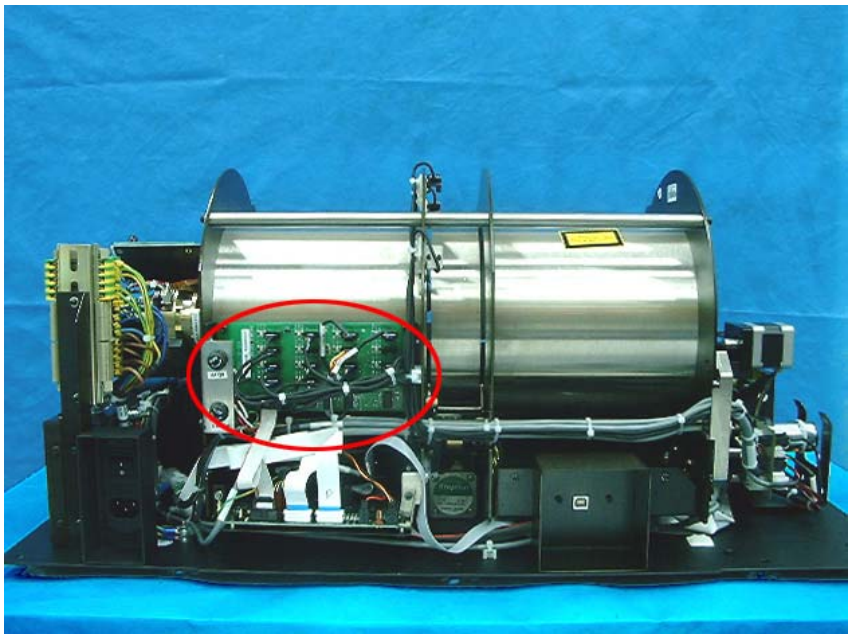


Connector 1 J208	**Destination: J500 on sensor card**
Connector 2 J203	**Destination: J401 on laser card.**
Connector 3 J205	**Destination: J1 on front panel led card.**

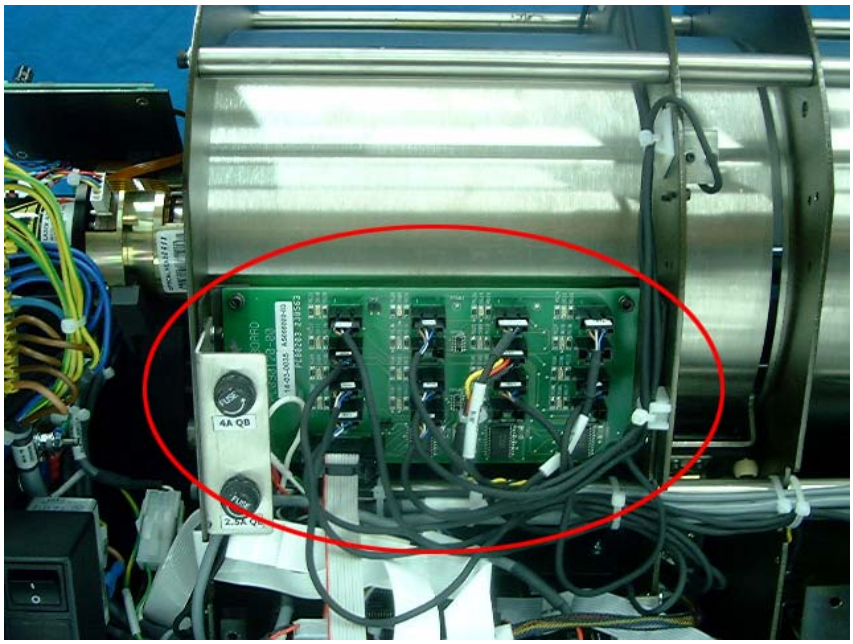
Connector 4 J213	**Destination: 12v power supply.**		
	1	orange	12v
Connector 5 J206 **Voltage on J206:**	**Destination: connectors panel (rollers motor).**		
	1	orange	12v
	2	Brown	GND
	Rollers forward +12v ; rollers backwards -12v ; rollers stop 0v		
Connector 6 J202	**Destination: J2 on enhanced motion card.**		
Connector 7 J204	**Destination: loader.**		
	Orange + blue	130Hz load/unload	
	Red + yellow	130Hz load/unload	
Connector 8 J201	**Destination: connectors' panel to stepper motor.**		
	Yellow + black	11KHz moving left/right ; 0KHz stop	
	Blue + white	11KHz moving left/right ; 0KHz stop	
Connector 9 J211	**Destination: 15v power supply.**		
	1	black	GND
	2	red	15v
Connector 10	**Destination: 5v power supply.**		
	1	black	GND
	2	red	5v
Connector 11 J200	**Destination: J302 on USB card**.		

3.5 Sensor Board

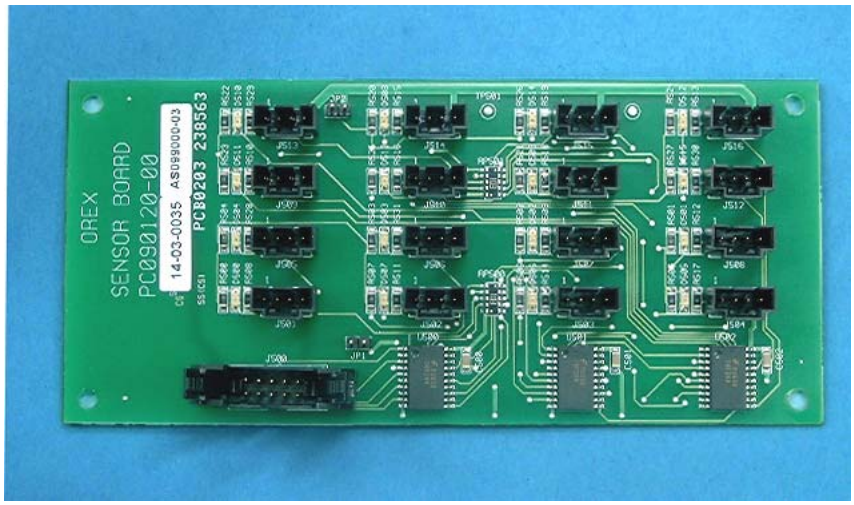
3.5.1 Location

1. 

3.5.2 Component

2. 

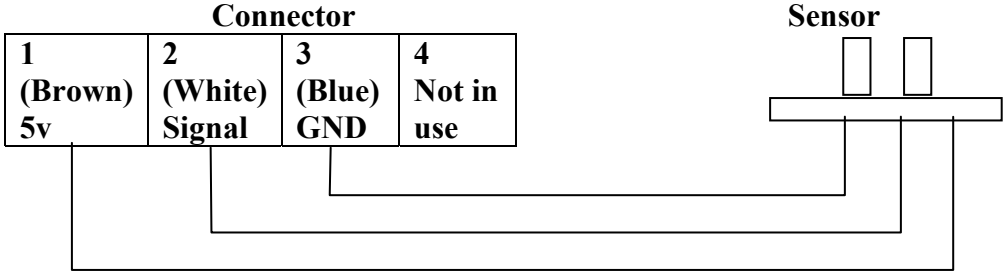
3.5.3 Description



	J513	J514	J515	J516
	J509	J510	J511	J512
	J505	J506	J507	J508
	J501	J502	J503	J504
J500				

J500 connector connects to J208 on motion card.
J501 connects to sensor 4 on the drum.
J502 connects to sensor 5 on the drum.
J505 connects to sensor 1 on the drum.
J506 connects to sensor 2 on the drum.
J507 connects to sensor 3 on the drum.
J508 connects to loader sensor in back position.
J509 connects to roller sensor.
J511 connects to W0 sensor.
J513 connects to cassette presence sensor.
J514 connects to cassette lock sensor.
J515 connects to right limit sensor.
J516 connects to left limit sensor.

Typical Sensor connections



Sensor on	**1**	**Brown**	**5v always**

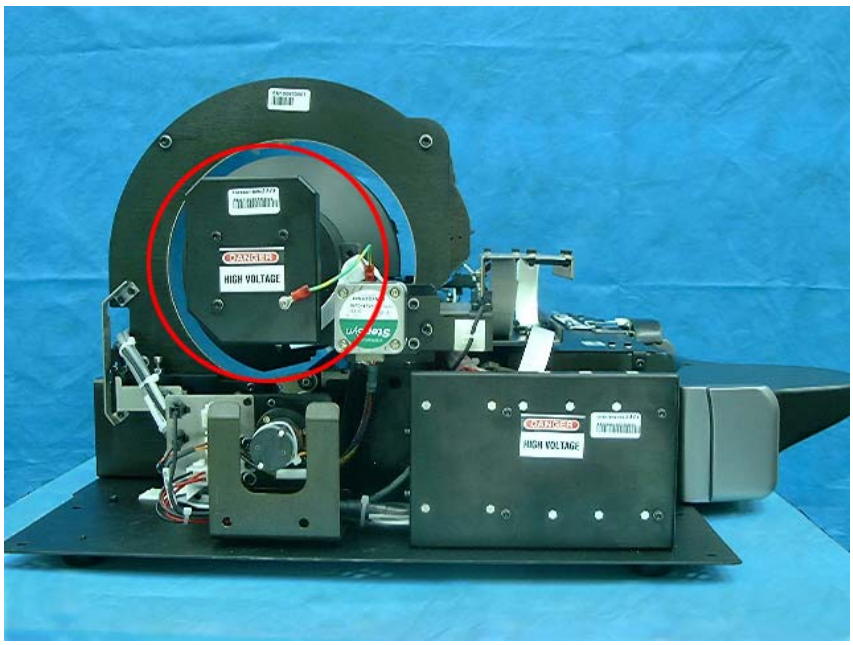
(Flag in sensor)	**2**	**White**	**0v**
	3	**Blue**	**GND always**
	4	**Not in use**	
Sensor off (Flag not in sensor)	**1**	**Brown**	**5v always**
	2	**White**	**5v**
	3	**Blue**	**GND always**
	4	**Not in use**	

Note:
Measuring voltage:

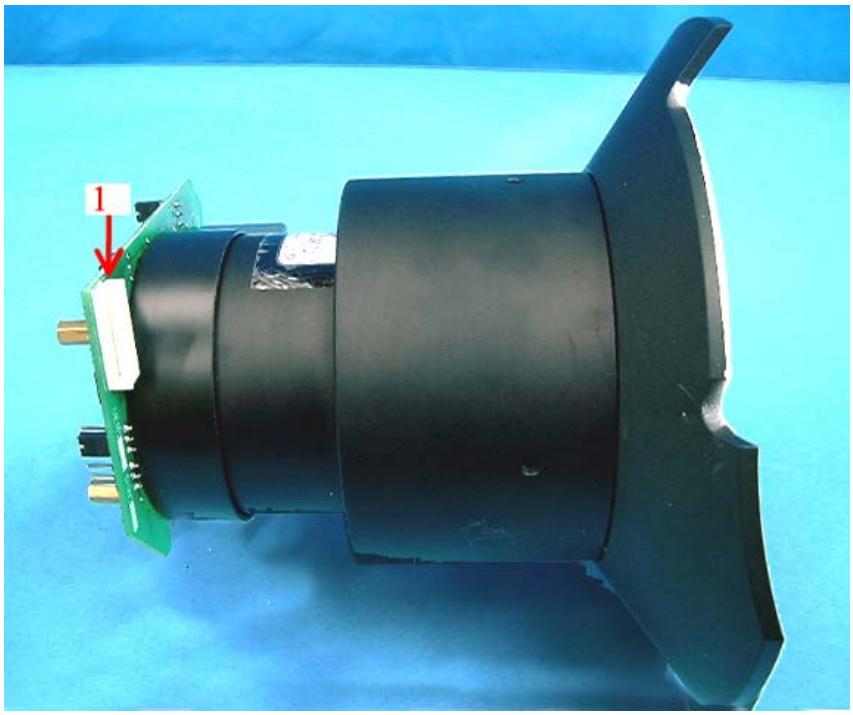
1. **All sensors except J511: measure between pin 2 & 3 and insert object between sensors.**
2. **For J511 only: measure between pin 2 & pin 3 from different sensor and insert cassette to system. The voltage should be between 4.5-5v.**

3.6 PM Assembly

3.6.1 Location



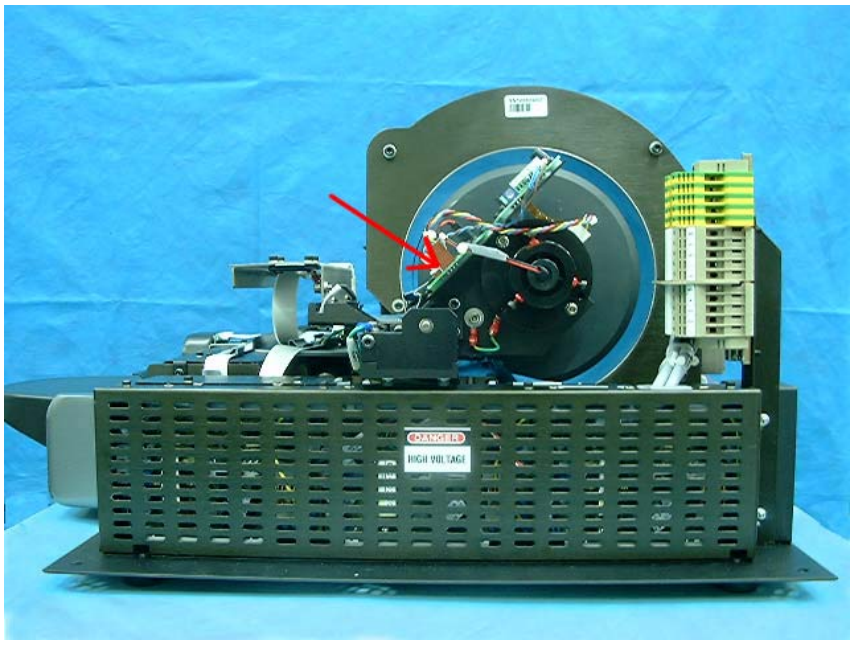
3.6.2 Component



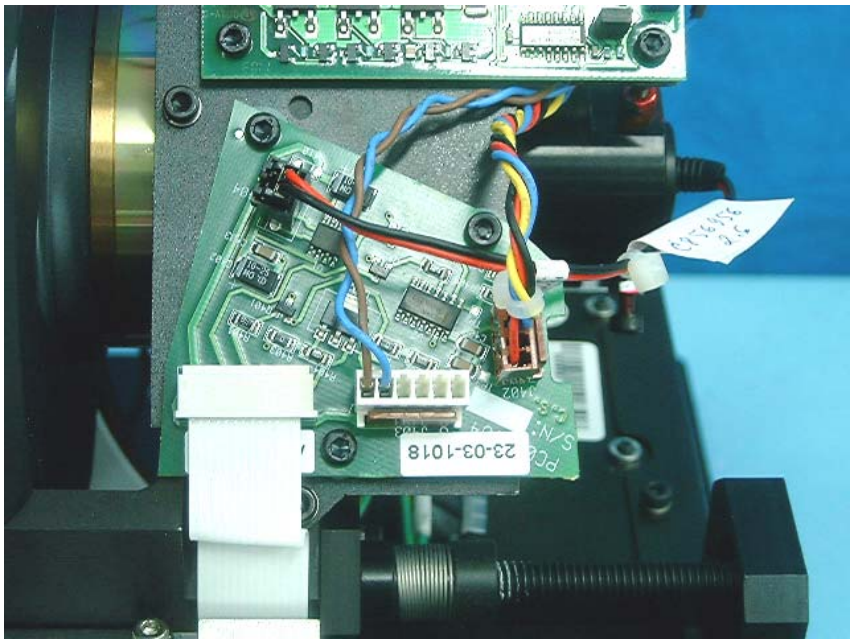
Destination: J300 on USB card.

3.7 Laser Board

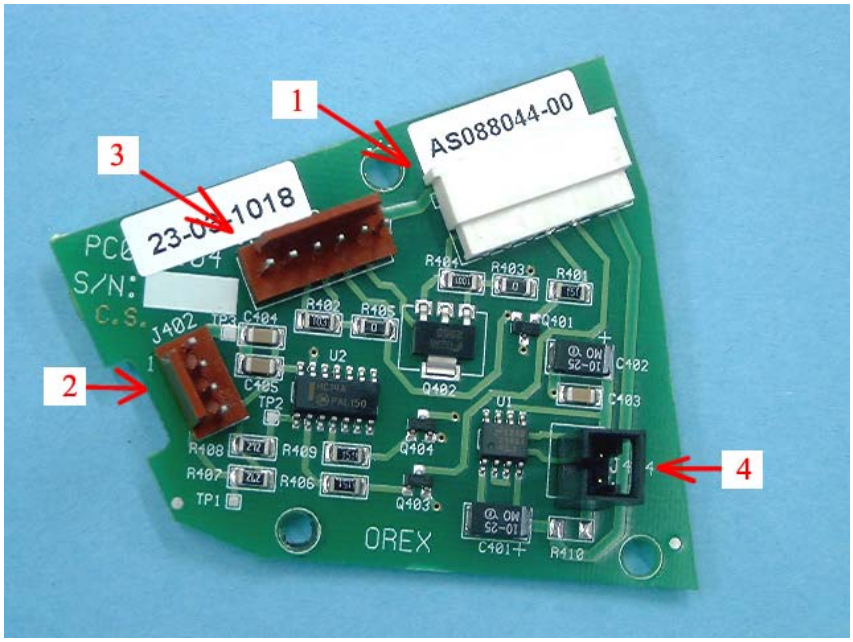
3.7.1 Location



3.7.2 Component



3.7.3 Description

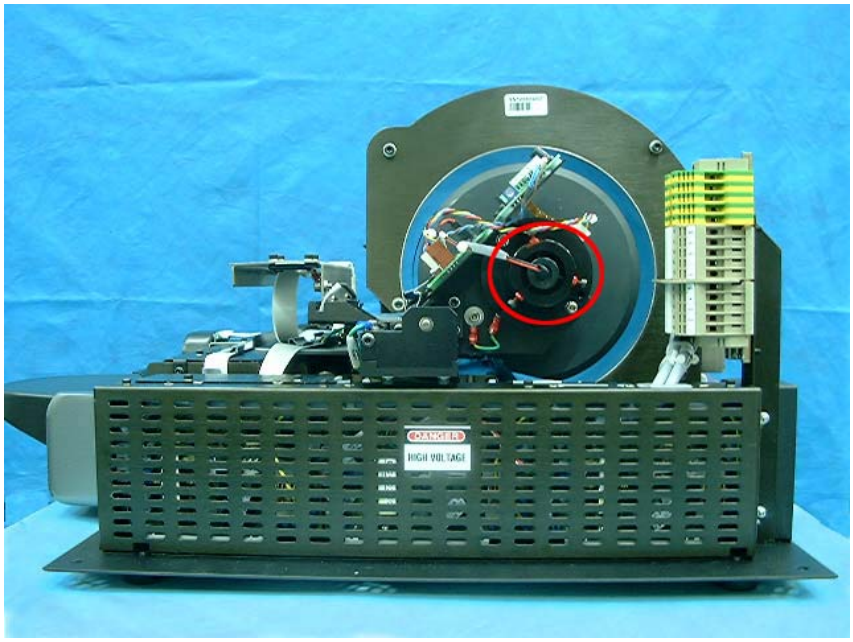


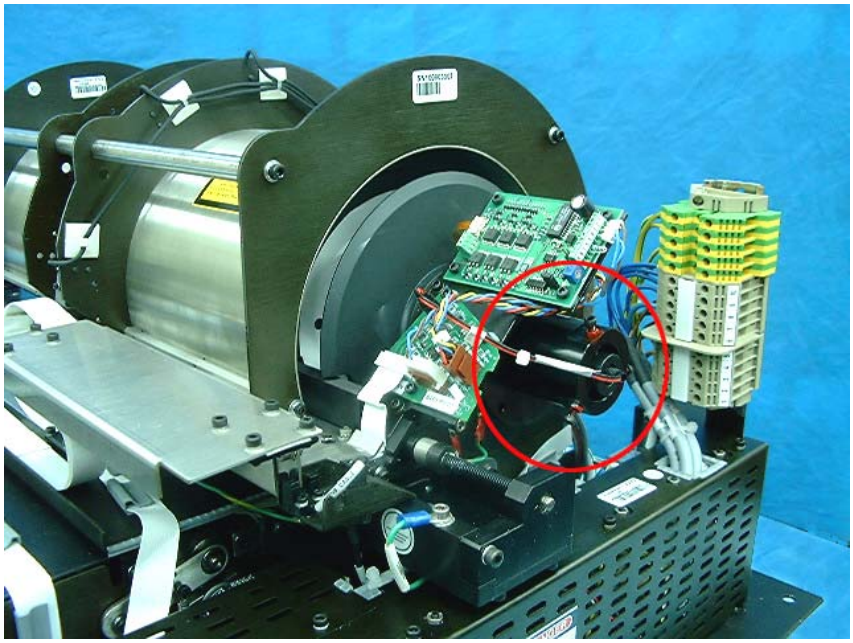
1	**Destination: J203 on motion card.**		
2	**Destination: encoder reader.**		
	1	Red	GND
	2	Black	Index 41±0.5 Hz
	3	Blue	Encoder 41± 0.5 KHz
	4	Yellow	5v

3	**Destination: rotation motor card.**		
	1	Brown	GND
	2	Blue	12v rotation motor on.
4	**Destination: laser assembly.**		
	1	Red	Laser On 3.3V
	2	Black	GND

3.8 Laser

3.8.1 Location

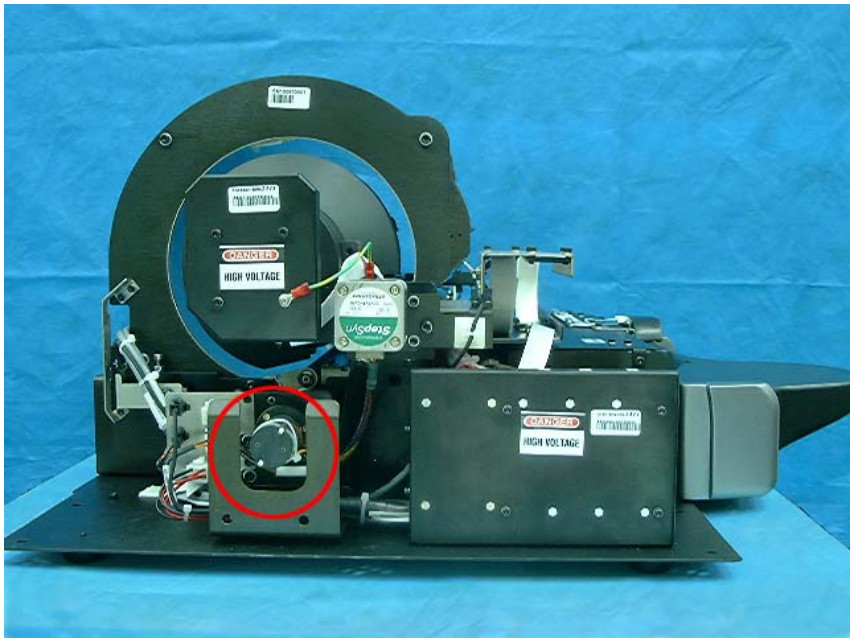




For parts identification, refer to Section 3.7.3, page 14.

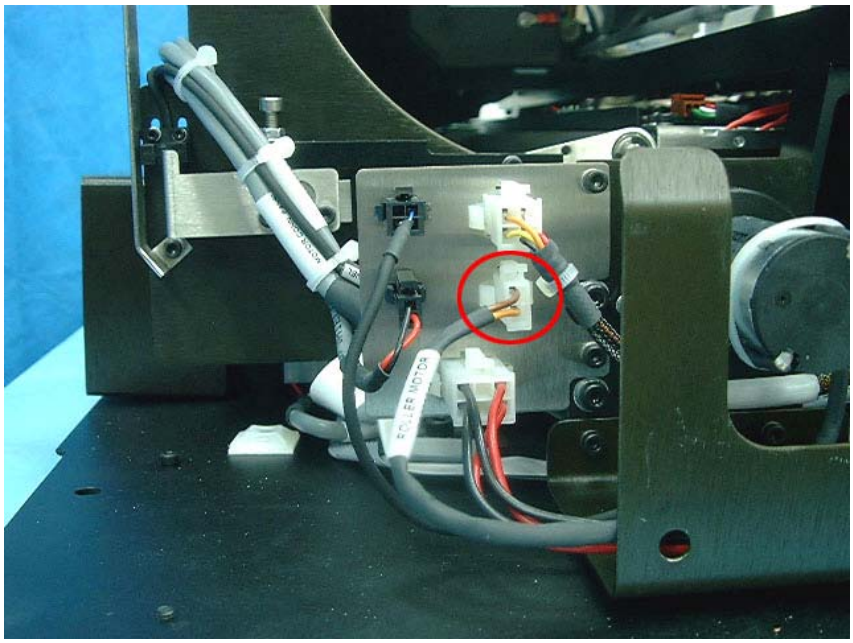
3.9 Roller Motor

3.9.1 Location



3.9.2 Component

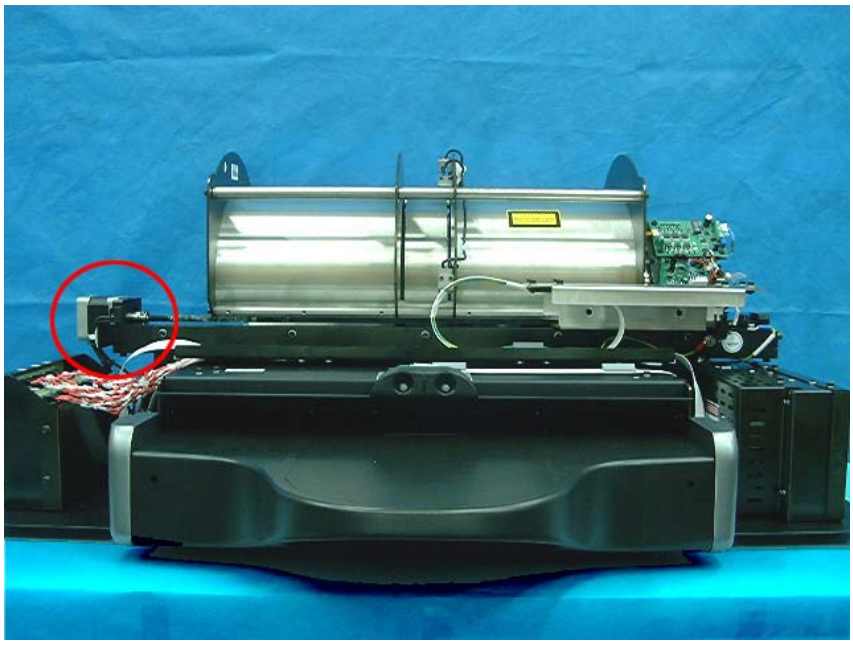
3.9.3 Description



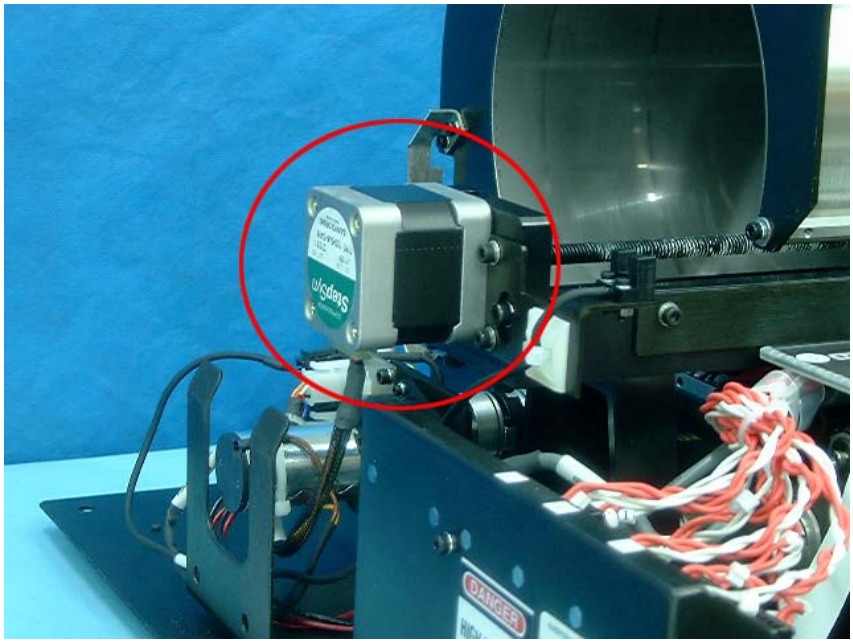
Connector's panel to the rollers motor.		
1	Orange	Rollers forward +12v; rollers backwards -12v; rollers stop 0v.
2	Brown	GND.

3.10 Step Motor Slide

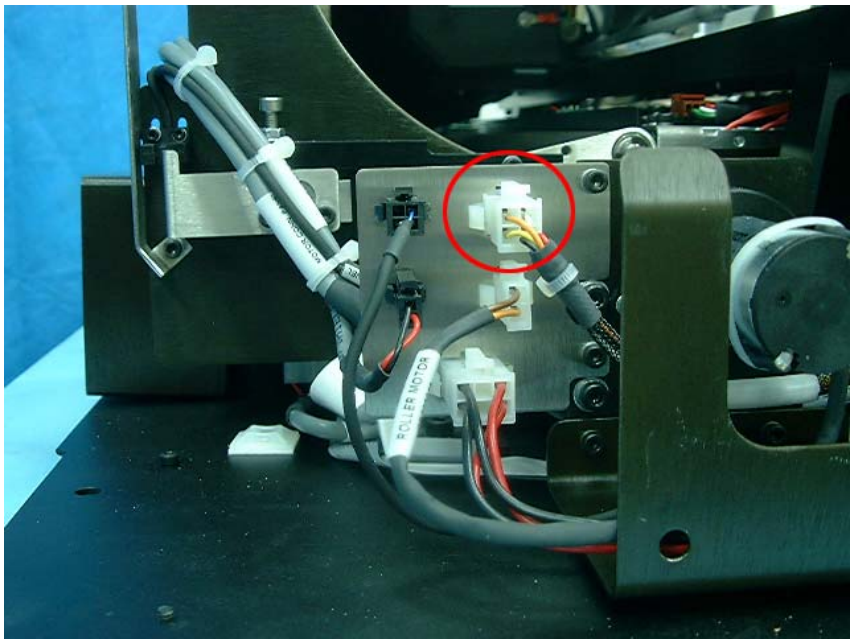
3.10.1 Location



3.10.2 Component



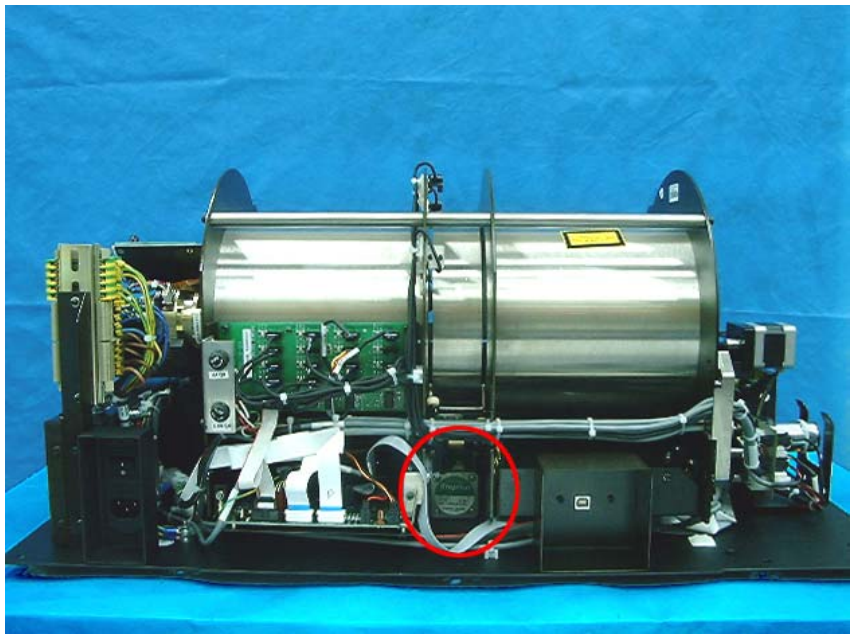
3.10.3 Description



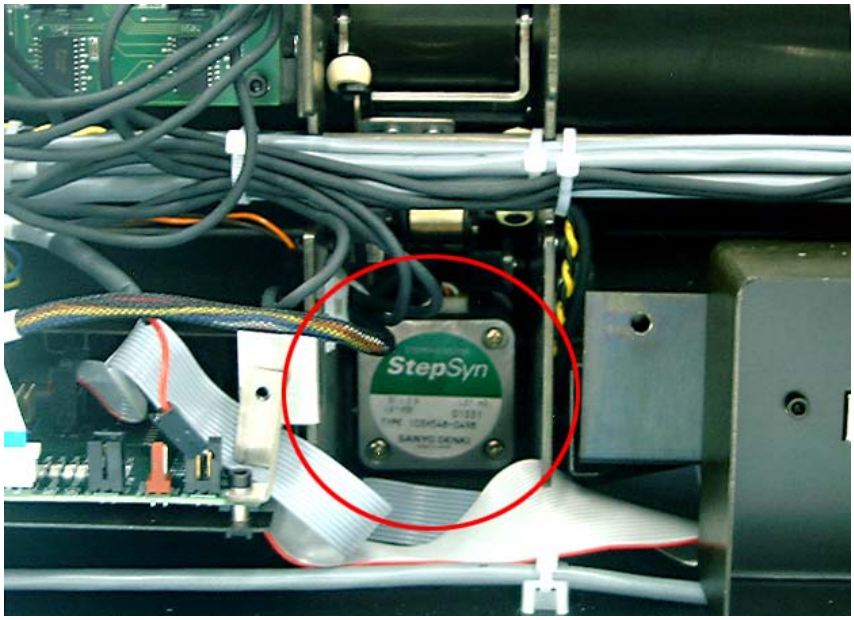
Connector's panel to stepper motor.	
Yellow + black	11KHz moving left/right ; 0KHz stop
Blue + white	11KHz moving left/right ; 0KHz stop

3.11 Step Motor Carriage

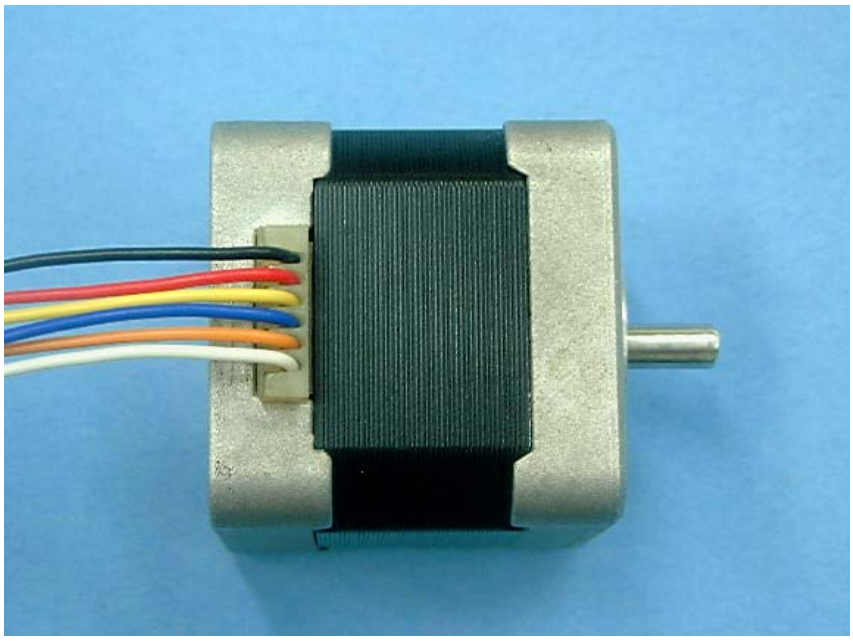
3.11.1 Location



3.11.2 Component



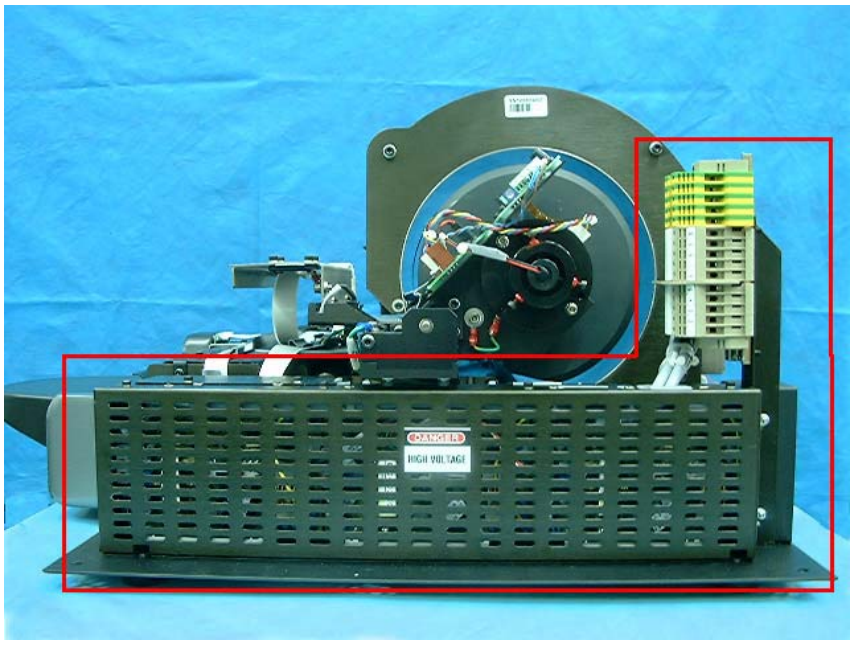
3.11.3 Description



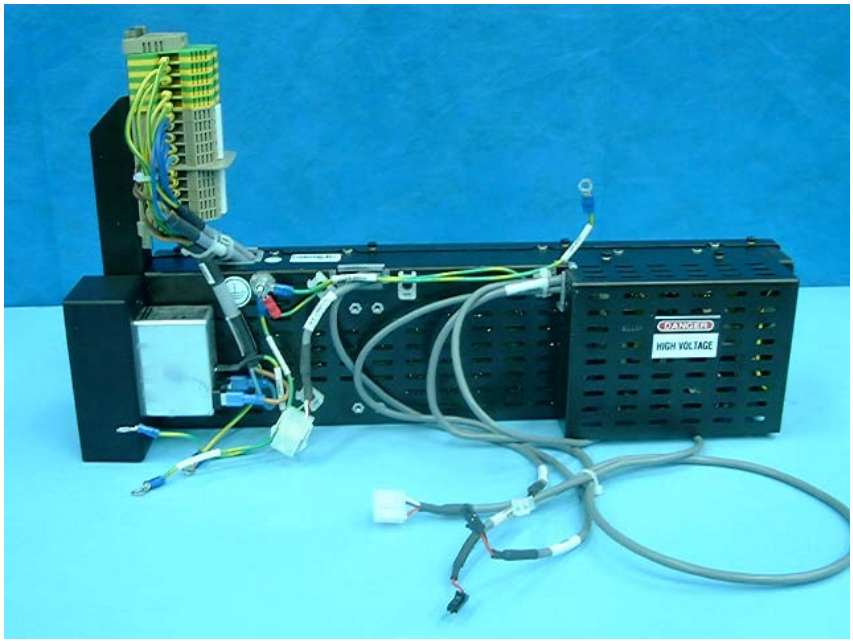
1	Destination: J204 on motion card.	
	Orange + blue	130Hz load/unload
	Red + yellow	130Hz load/unload

3.12 Power Supply Assembly

3.12.1 Location



3.12.2 Component

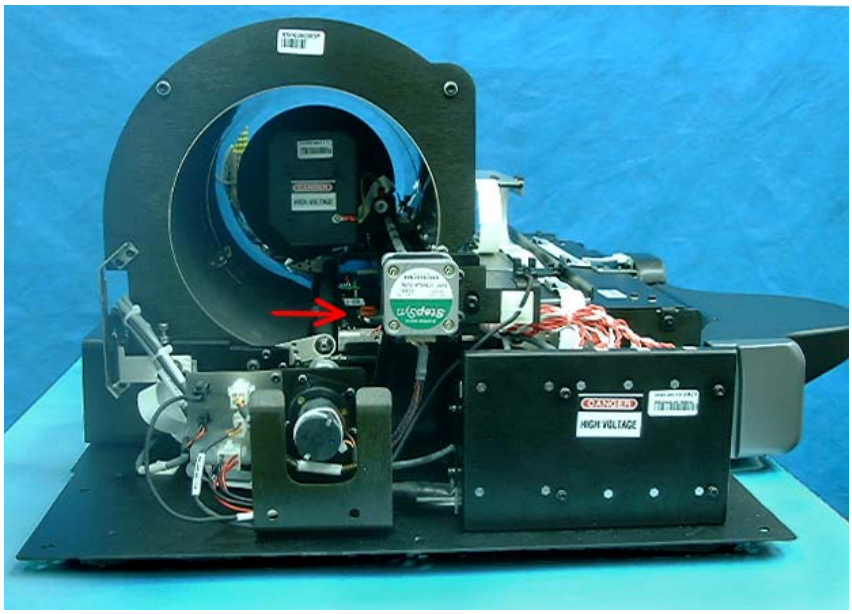


3.12.3 Description

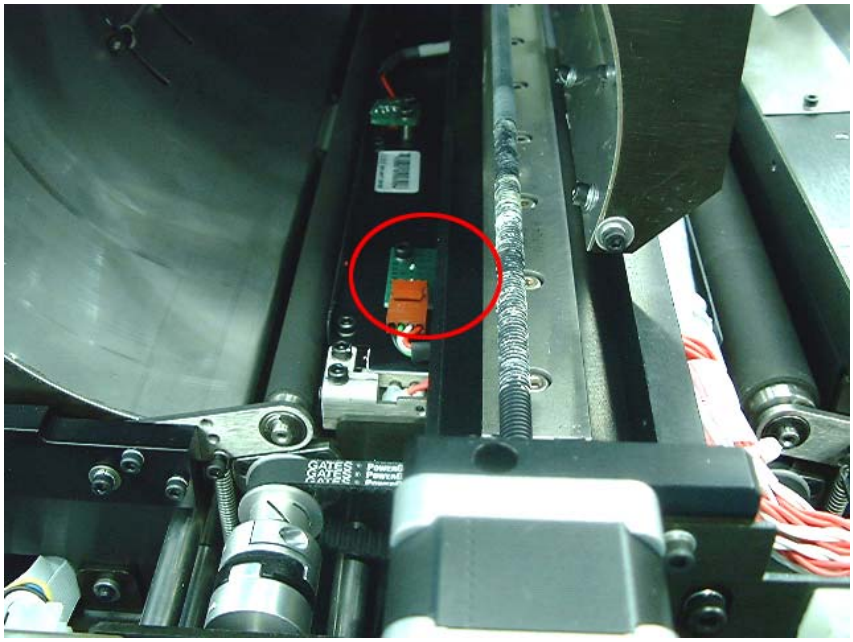
P1	**Source: AC INPUT POWER.**		
P2	CB 090065_a Destination: J211 on motion board		
	1	Red	15v
	2	Black	GND 0v
P3	CB 090064_a Destination: U201 on motion board		
	1	Red	5v
	2	Black	GND 0v
P4	CB 090071 Destination: J213 on motion board		
	1	Red	12v
	2	Black	GND 0v
P5	CB 090064_b Destination: J305 on USB board (power input)		
	1	Red	5v
	2	White	12v
	3	Black	GND 0v
P6	CB 090065_b Destination: Fuses connector		
	1	Red	15v
	2	White	12v
	3	Green	GND 0v
	4	Black	GND 0v

3.13 Erase Lamps Sensor

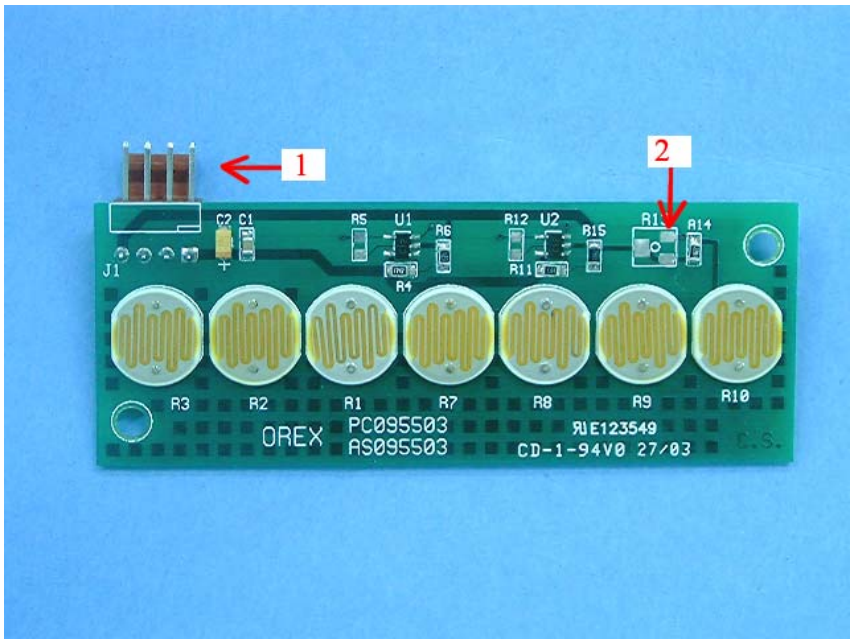
3.13.1 Location



3.13.2 Component



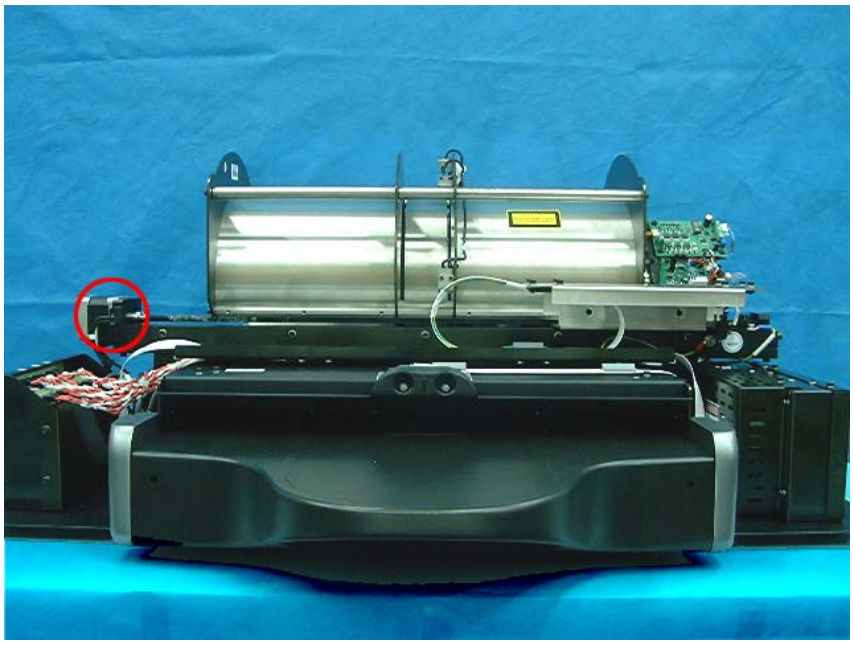
3.13.3 Description



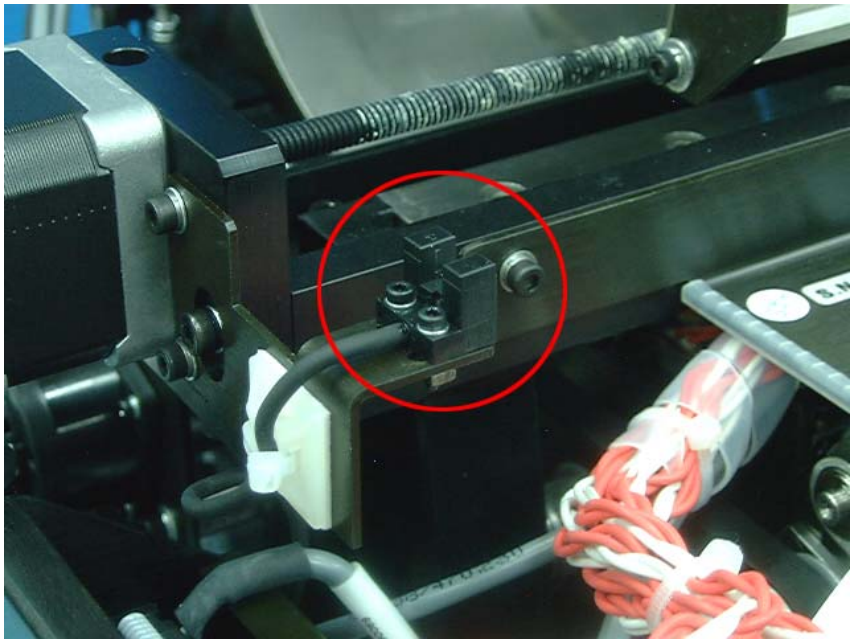
1	Destination: Erase lamps Board		
	1	Red	5v
	4	Black	GND
2	Test Point		
		Dark	0v
		Light	3v
	Voltage decrease when lamps failure		

3.14 Left Origin Sensor

3.14.1 Location



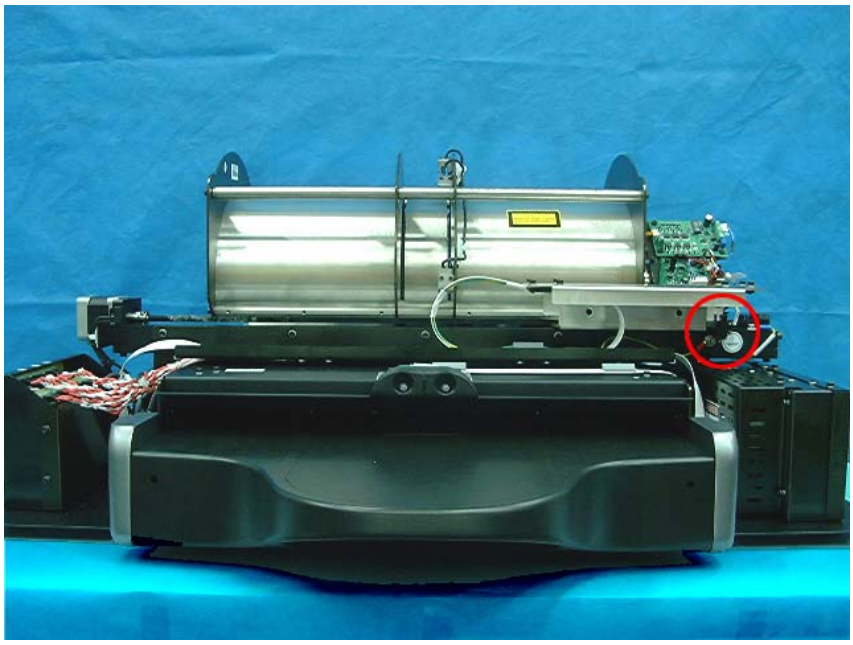
3.14.2 Component



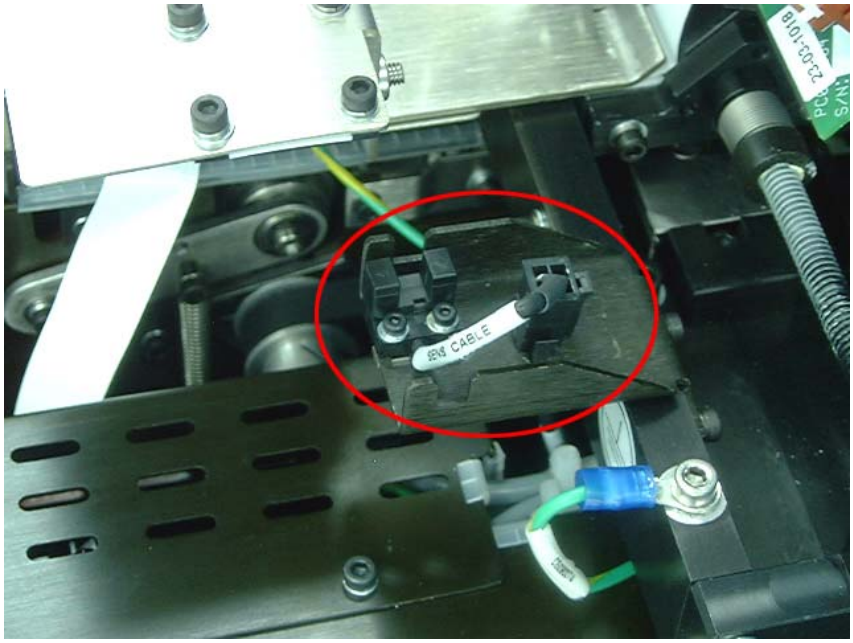
For the sensor connector number on the sensor board and sensor measurements see Section 3.5.3, page 11..

3.15 Right Origin Sensor

3.15.1 Location



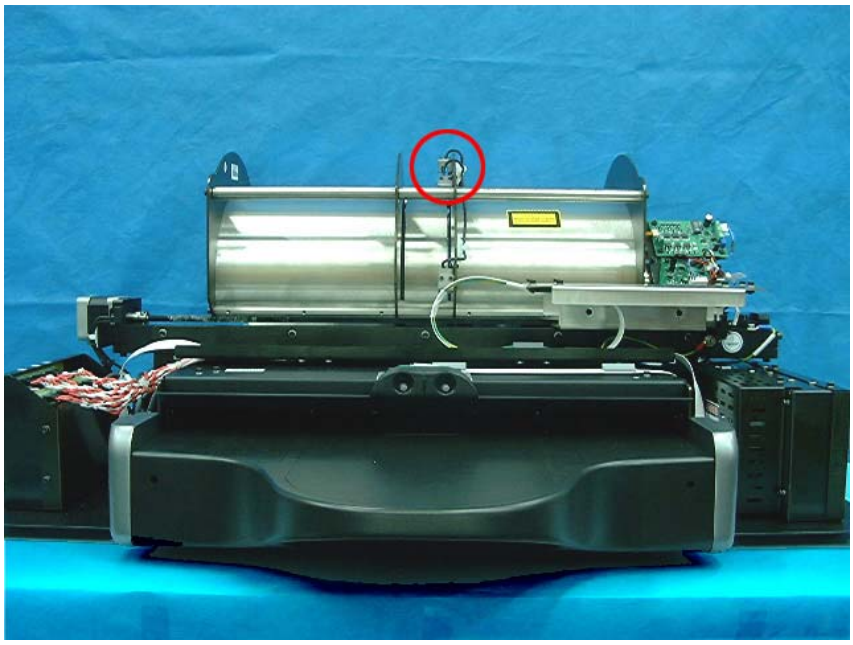
3.15.2 Component



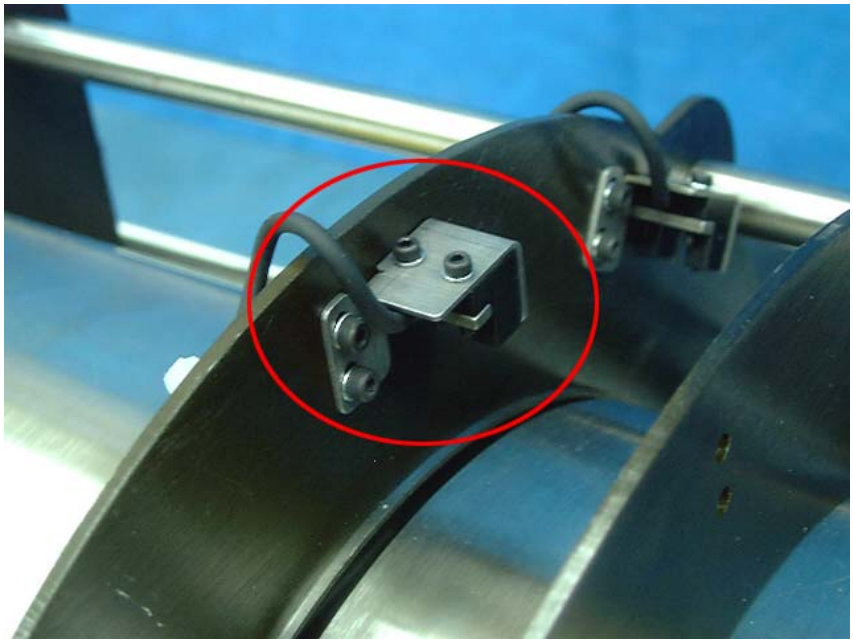
For the sensor connector number on the sensor board and sensor measurements, see Sensor Board, Section 3.5, page 10.

3.16 Plate Size Sensor

3.16.1 Location



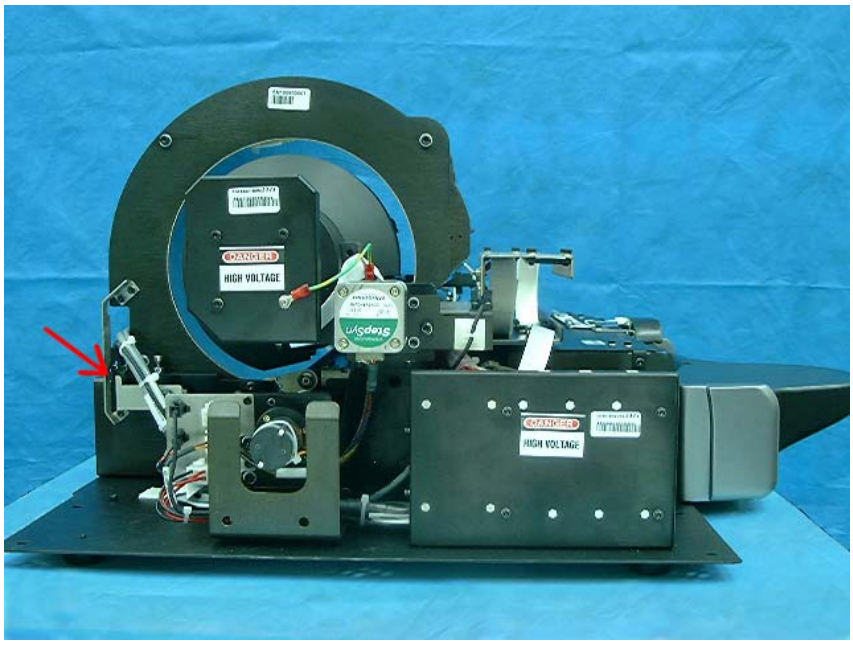
3.16.2 Component



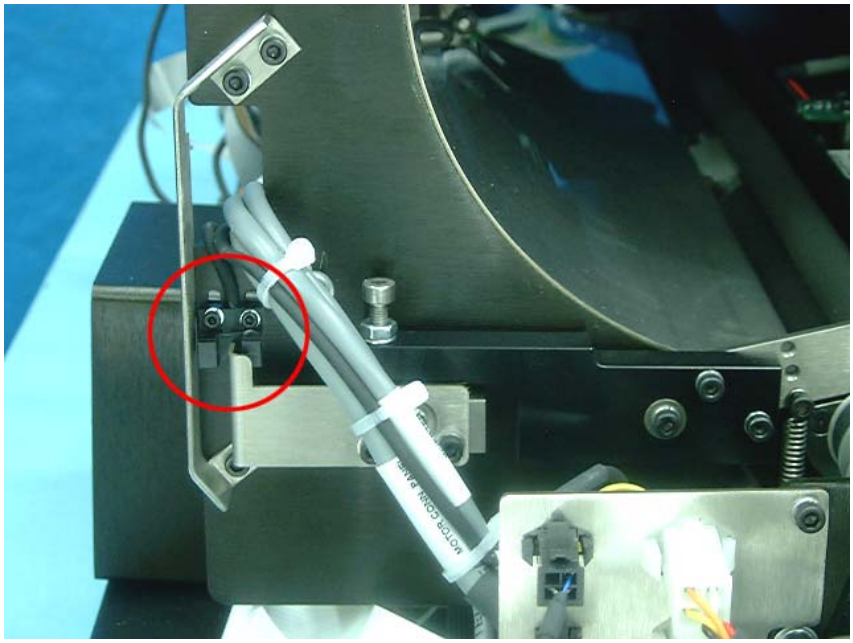
For the sensor connector number on the sensor board and sensor measurements see Sensor Board, Section 3.5, page 10.

3.17 Rollers Sensor

3.17.1 Location



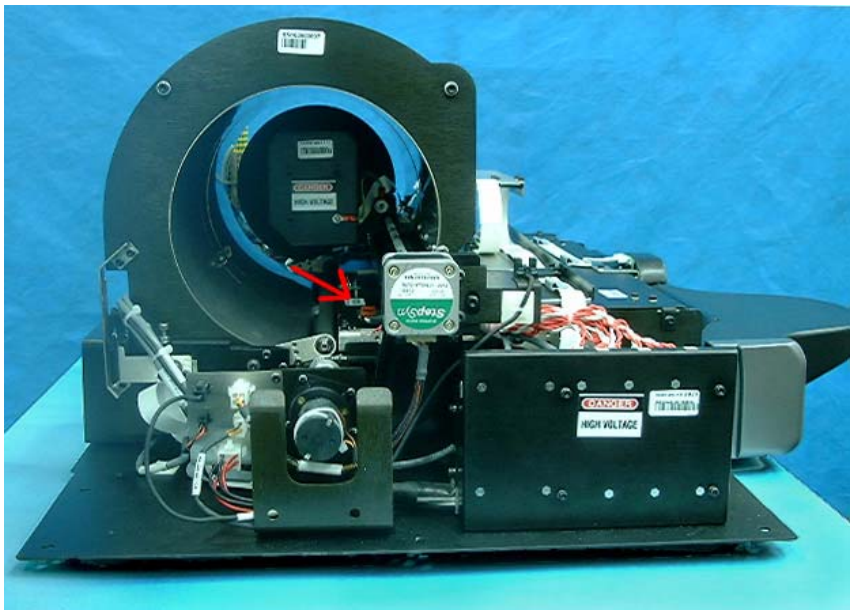
3.17.2 Component



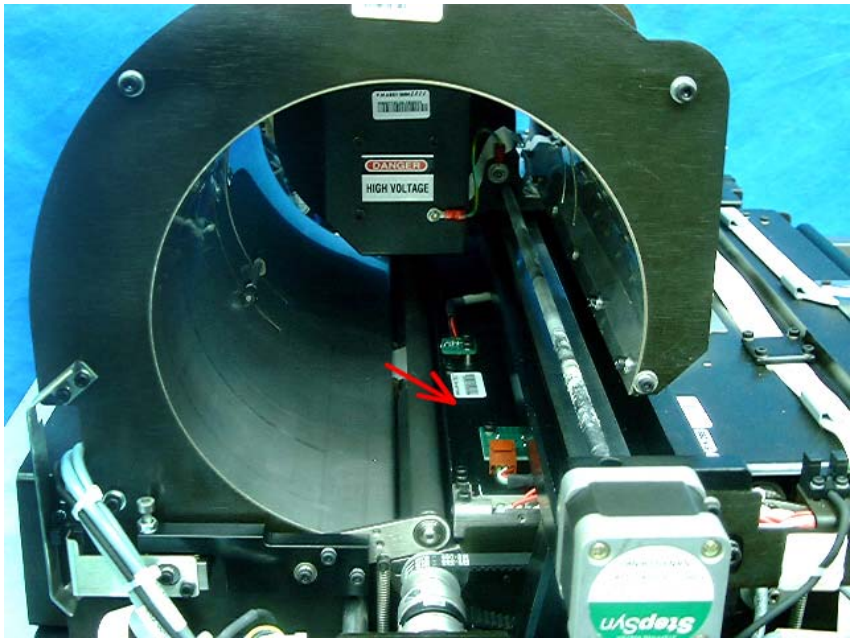
For the sensor connector number on the sensor board and sensor measurements see Sensor Board, Section 3.5, page 10.

3.18 Erase Lamps

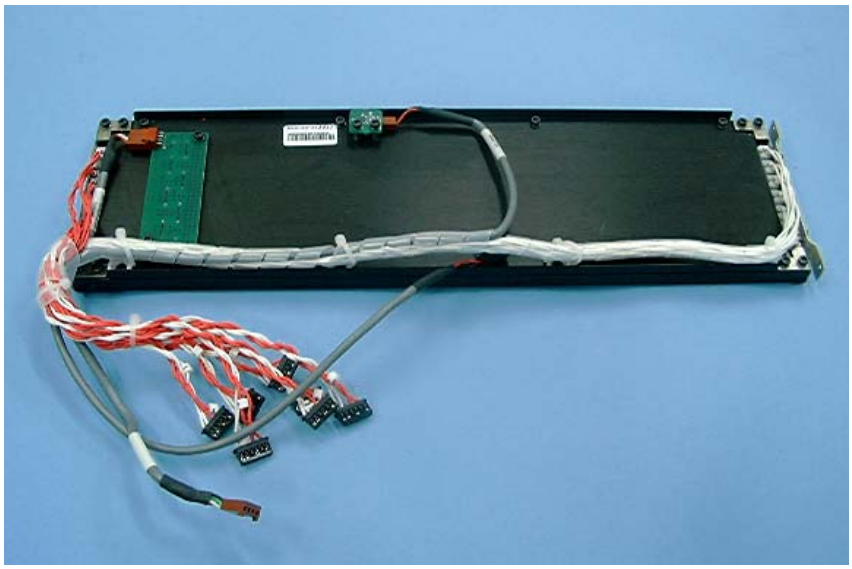
3.18.1 Location



3.18.2 Component



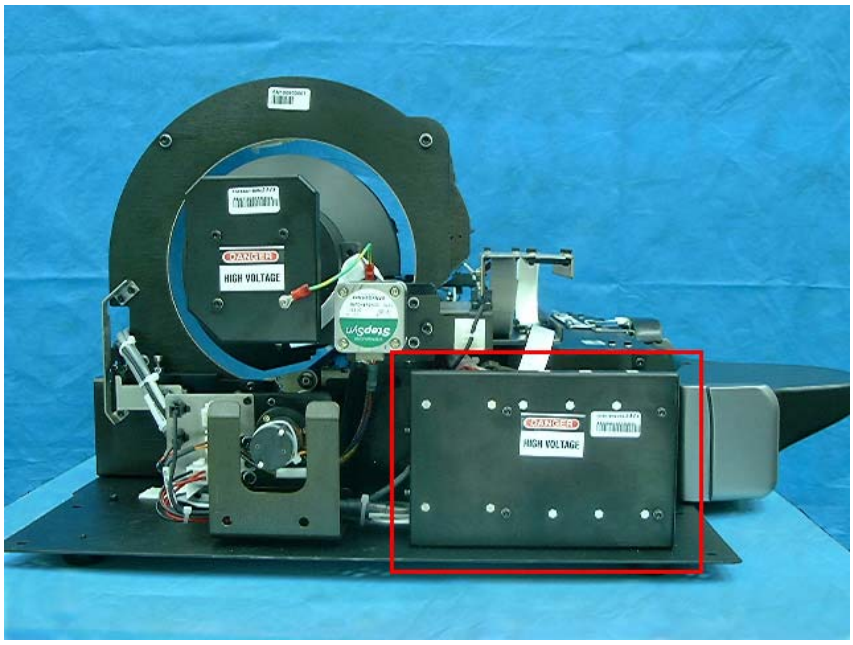
3.18.3 Description



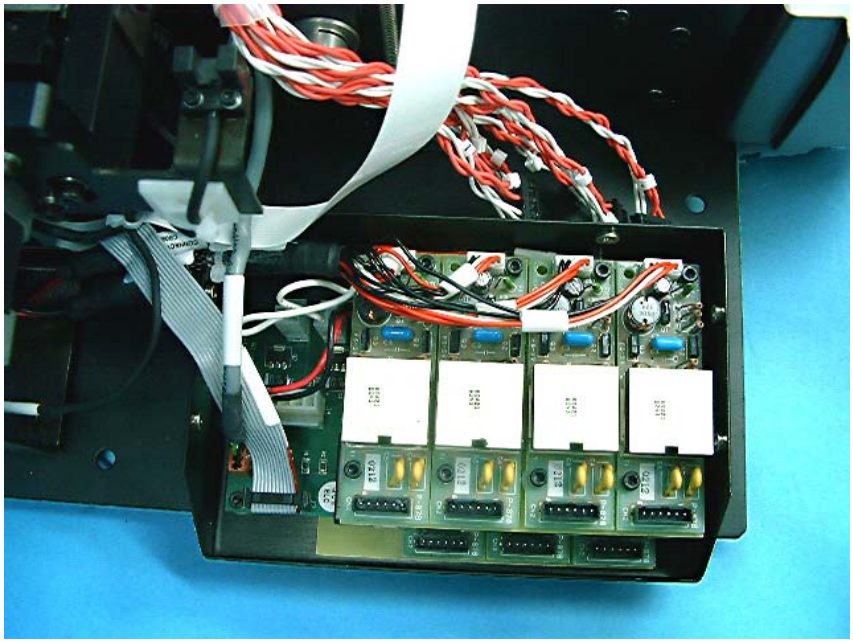
1	**Destination: Connectors panel**		
	1	Red	5v
	2	Black	GND 0v
2	**CB090069 Destination: Erase lamps board**		
	1	Red	5v
	2	White	Lamp on 0v; lamp off 2.5-5v
	3	Green	Lamp on 0v; lamp off 2.5-5v
	4	Black	GND
3	**Destination: Inverters.**		
	AC high voltage		

3.19 Inverters Assembly

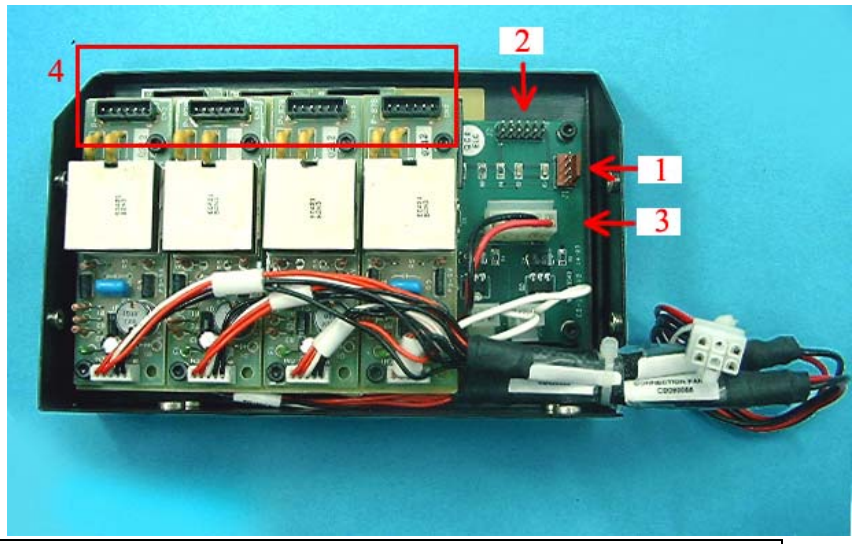
3.19.1 Location



3.19.2 Component



3.19.3 Description



1	**Destination: J1 ON Lamp Sensor card**		
	1	Red	5v
	2	White	Lamp on 0v; lamp off 2.5-5v
	3	Green	Lamp on 0v; lamp off 2.5-5v
	4	Black	GND
2	**Destination: J202 on motion card**		
3	**Destination: p2 on 15v power supply**		
	1	Red	15v
	2	White	GND
4	**AC - High voltage to erase laps**		

4. Preventive Maintenance

4.1 Cleaning the Rollers

4.1.1 Overview

The rollers should be cleaned periodically to remove dust and small particles. The roller-cleaning device enables you to clean the rollers that feed the image plate from the cassette into the reader.

The Cleaning device includes the following items:

- Cleaning tray
- Cleaning plate with adhesive strips covered with protective paper/a protective envelope.

4.1.2 Using the Cleaning Plate to Clean the Rollers

1. Remove the cassette and plates form the reader.
2. Open the Scanner Interface.
3. On the Scanner Interface, click the **Setup** button. The **Setup** dialog box opens.
4. In the **Setup** dialog box, select the **Anatomical** tab.
5. Click the **Prepare** button in the **Scanner cleaning** box located in the lower left corner of the **Anatomical** tab.
6. Disconnect the reader from the electric power source.
7. Attach the cleaning tray to the reader. Push it in until it locks.

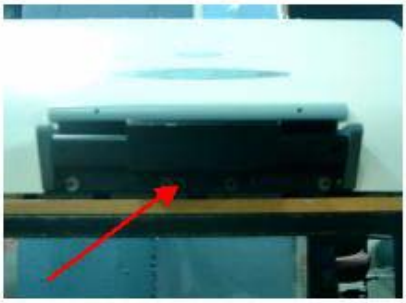
8. Remove the transparent protective sheet/protective envelope from the cleaning plate.

9. Remove the protective paper strips from the cleaning plate to expose the adhesive.

10. Place the cleaning plate on the tray. Make sure the cleaning plate is placed in the correct direction, as specified on the plate.

11. While holding onto the plate, push the plate into the reader. It should go in almost entirely. A 10 cm segment of the plate should remain visible. Then pull the plate out.
12. Repeat step 11 four to six times.

13. Remove the cleaning plate from the reader. Disconnect the cleaning tray by pulling out the knob underneath the front tray.

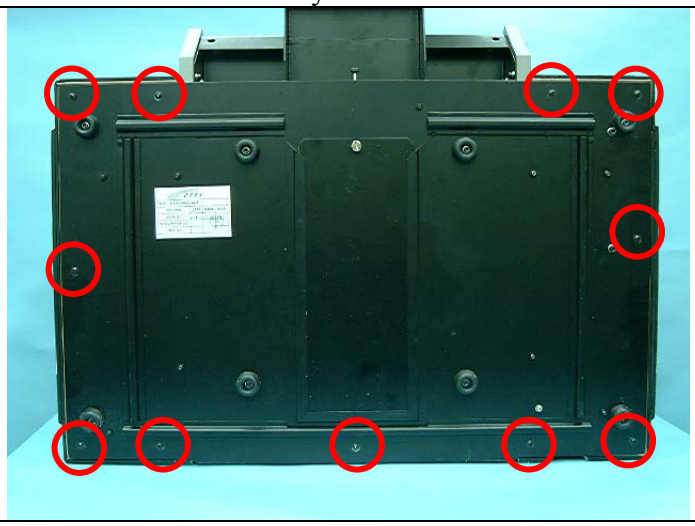


5. Service Operation

5.1 Removing the Cover

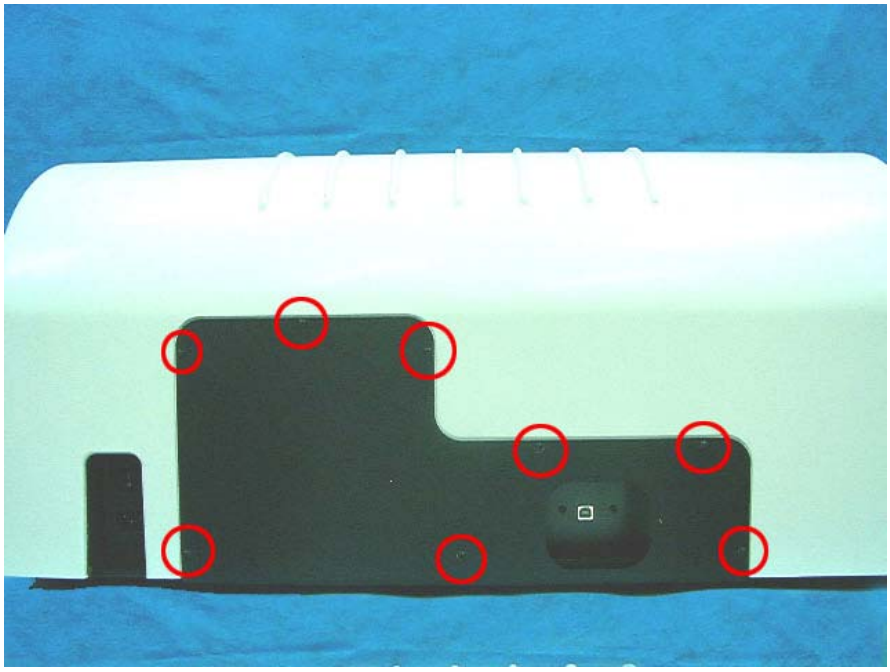
For any service operation, the cover of the scanner must be removed. After the service operation is finished, the cover must be secured back to the scanner. Before removing the main cover, it is necessary to remove the back service panel.

5.1.1 Main Cover

1	The cover is secured to the system with eleven Philips screws around the base of the system
	
2	When opening the cover, do not place the scanner on its back (bottom-side up). Pull the system to the edge of the table and open the screws on the bottom. Repeat this for all sides of the system, and when all the screws are open, lift the cover up and remove it from the system.

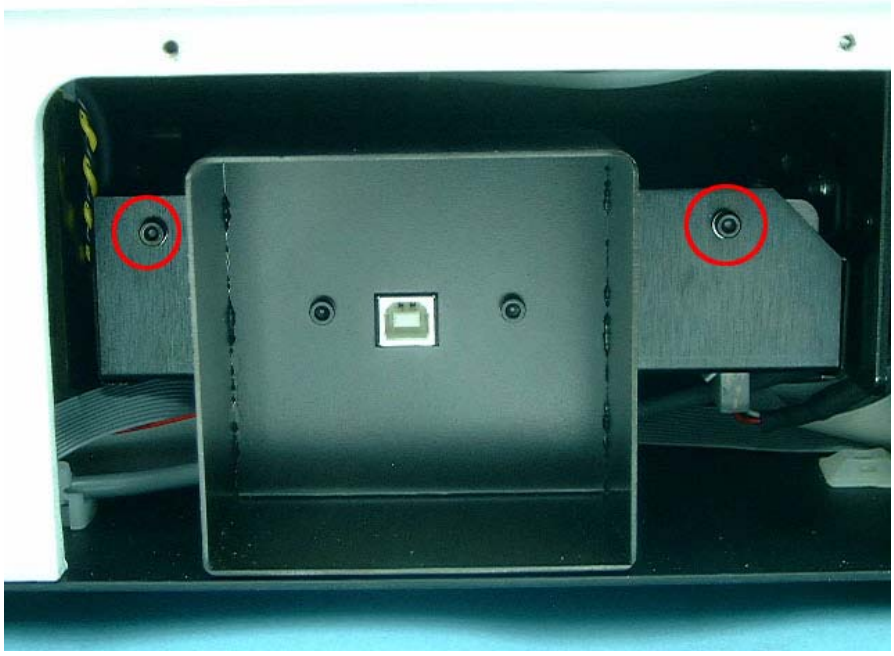
5.1.2 Service Panel

1. Open the back panel Philips screws.

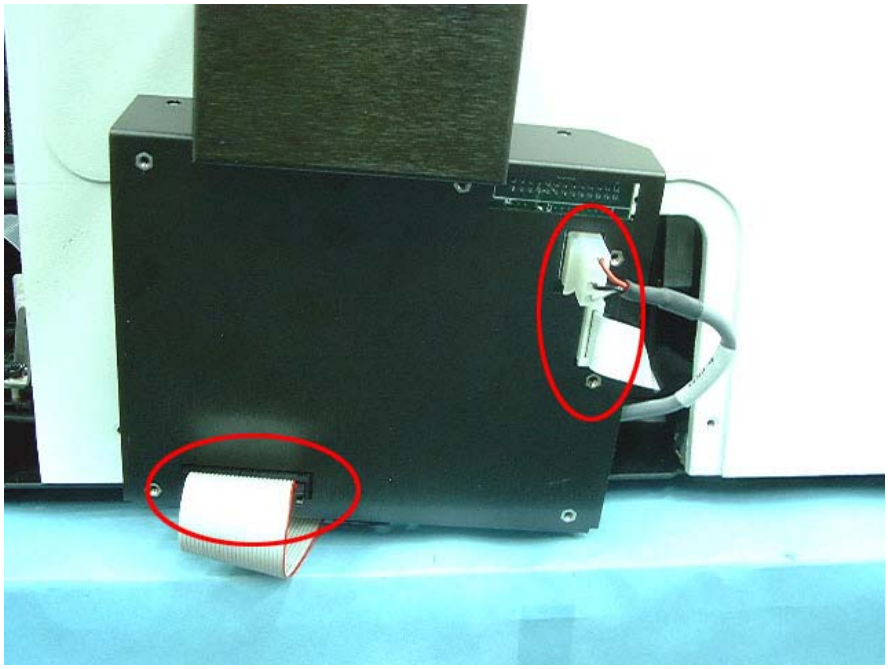


5.2 Replacing the USB Board

1. Remove the Service Panel. Refer to Section 5.1.1, page 37.
2. Open the two 3.0mm screws of the USB bracket.



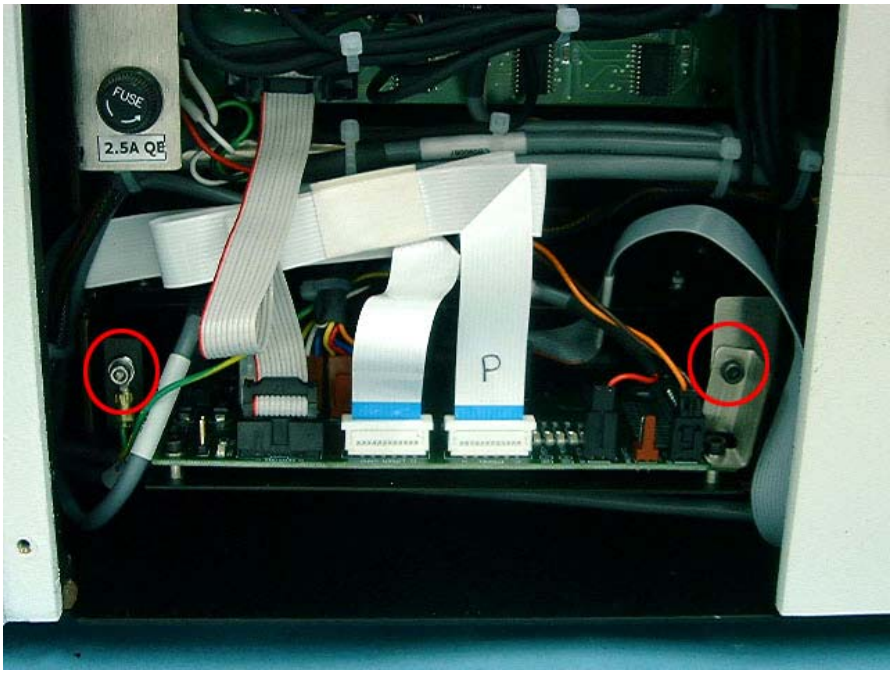
3. Pull the USB out and disconnect the cables on the bottom of the board.



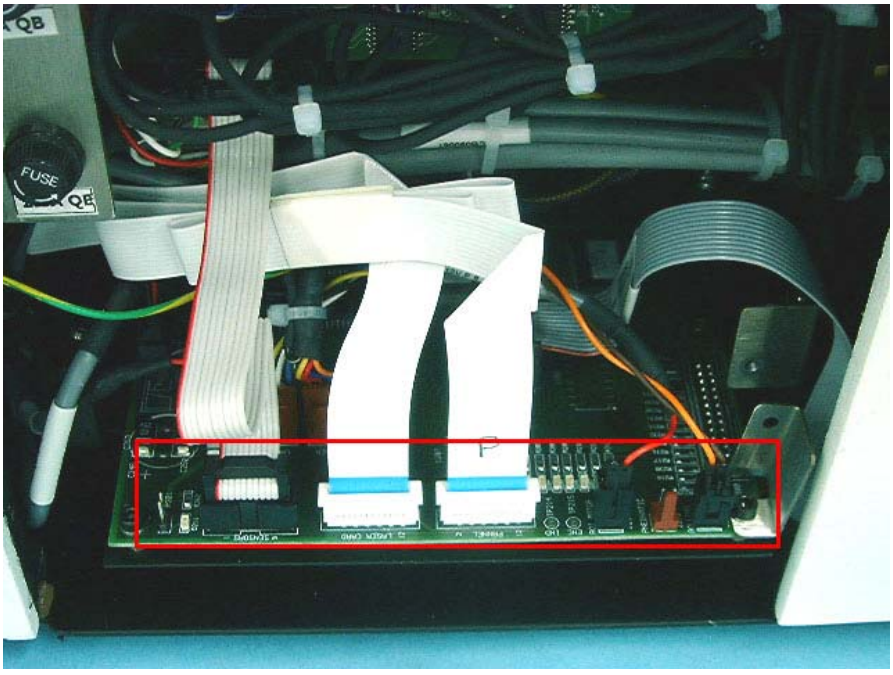
4. Connect the new USB, return it to its place, and close the bracket screws.
5. Close the back panel.

5.3 Replacing the Motion Board

1. Remove the Service Panel. Refer to Section 5.1.1, page 37.
2. Open the two 3.0 Allen screws holding the motion board bracket.



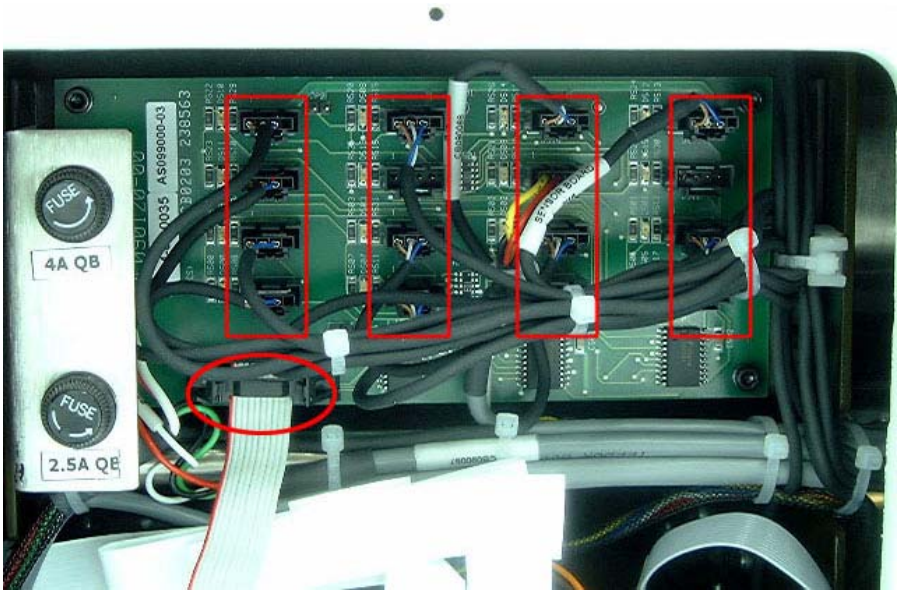
3. Pull the motion out, and disconnect the cables.



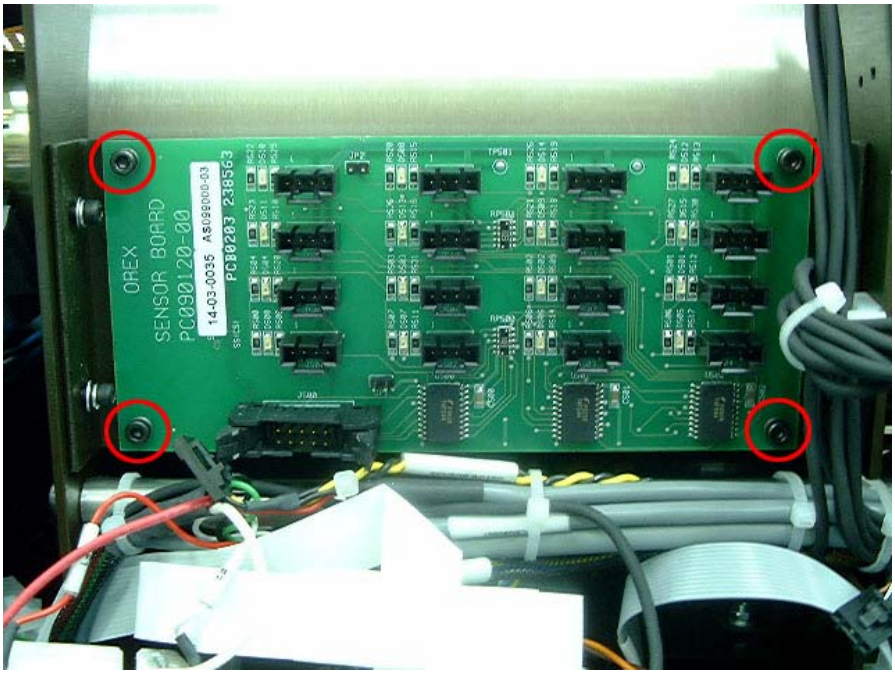
4. Place the new Motion, connect the cables, and close the screws on the bracket.
5. Close the back panel.

5.4 Replacing the Sensor Board

1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Disconnect the cables from the sensor board.



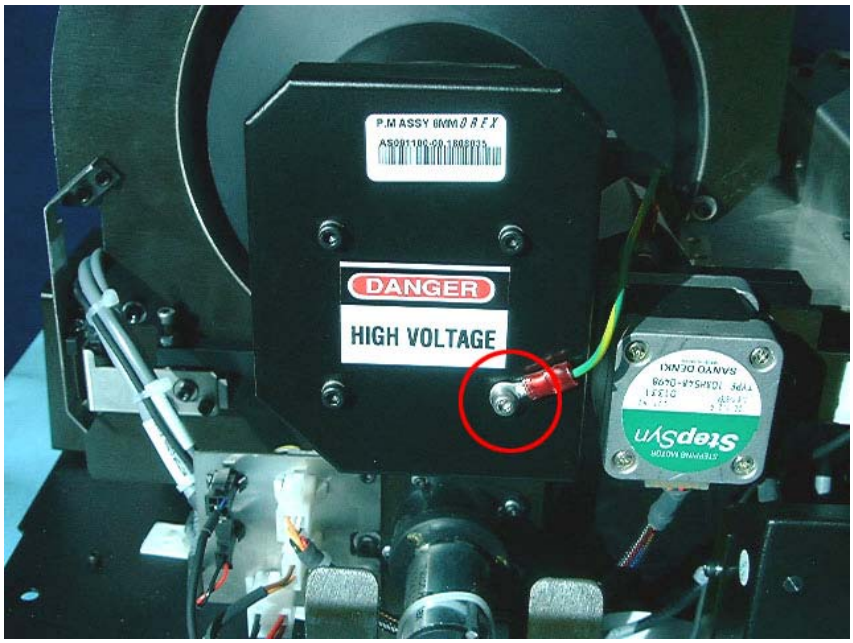
3. Open the four 3.0mm Allen screws holding the board.



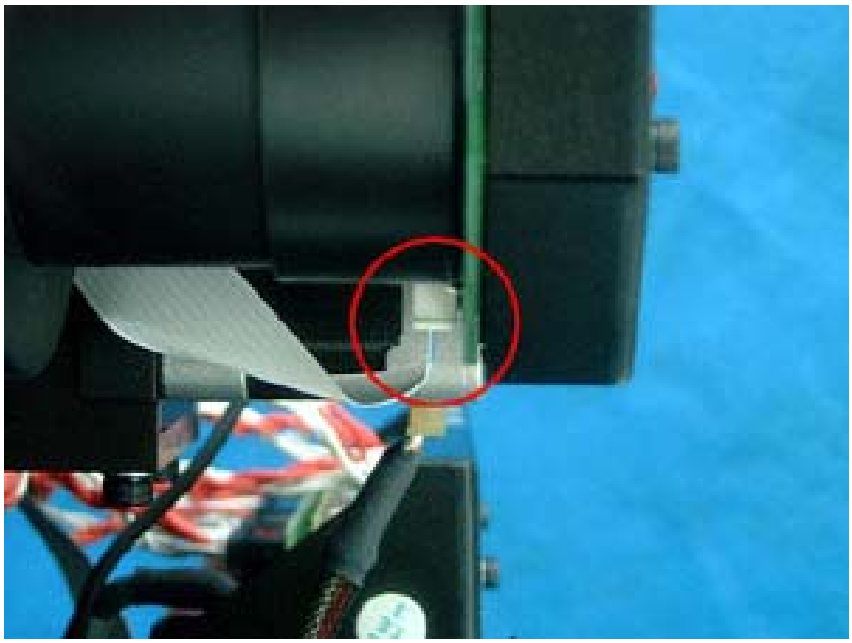
4. Remove the board and connect the new one with Allen screws.
5. Connect the cables back to the board; on each connector there is a number indicating to where it should be connected.

5.5 Replacing the PM Tube and PM Board

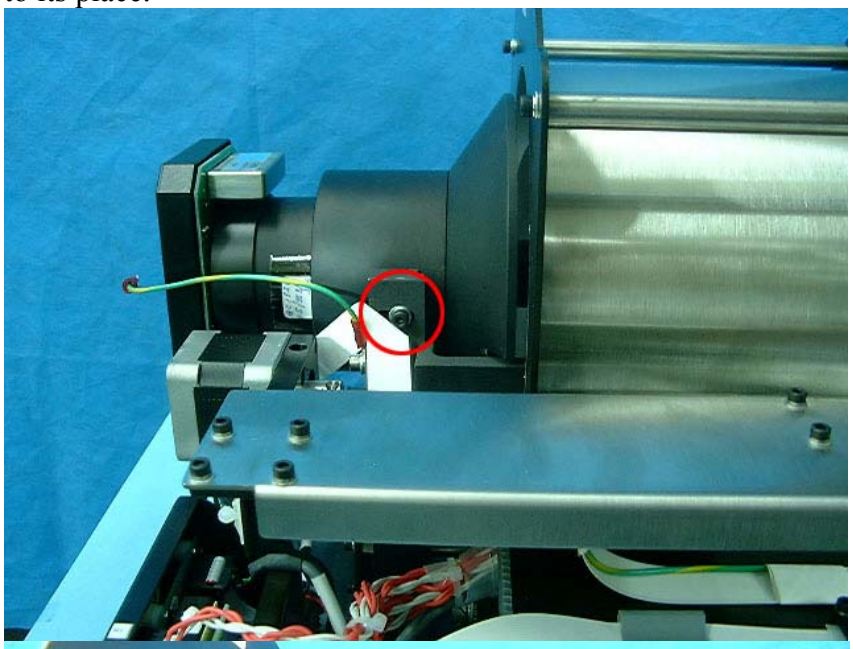
1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Move the Optical Head to the left, using the scanner Diagnostic tab in the Setup.
3. Open the 3.0mm Allen screw that attaches the ground wire to the PM cover.

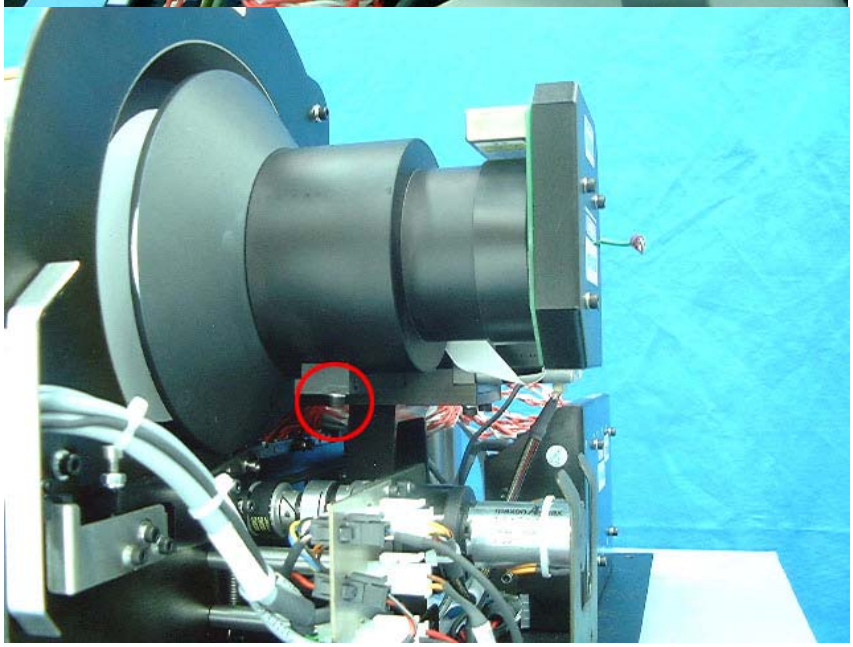


4. Disconnect the flex cable from its connector at the bottom of the PM board.



5. Open the two 3.5mm Allen screws that attach the PM assembly to its place.

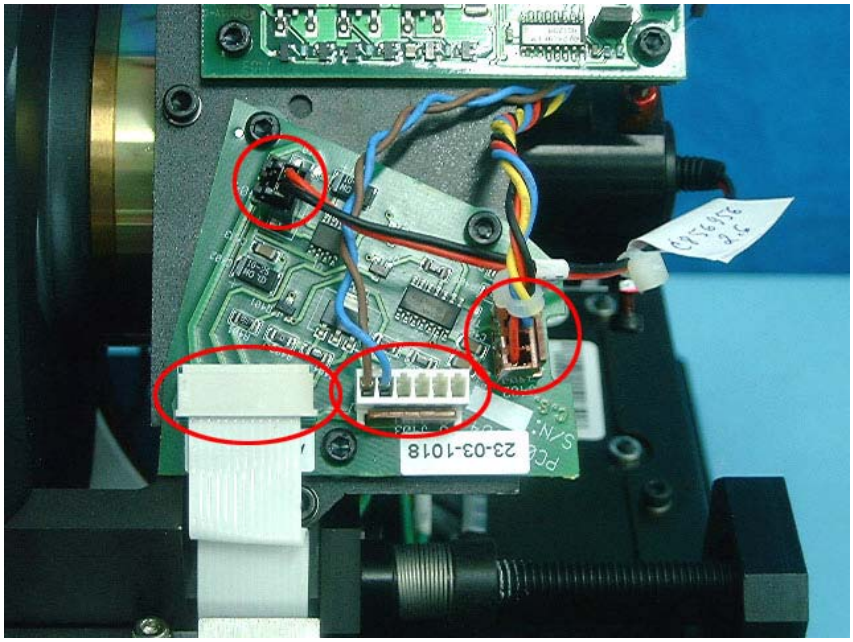




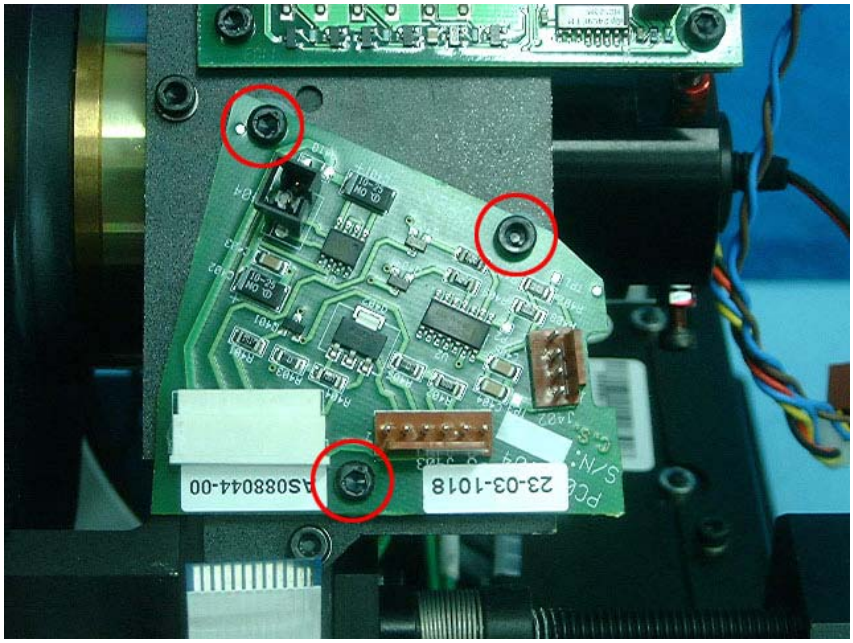
6. Replace the PM assembly and secure with Allen screws; the short screw is at the bottom.
7. Connect the flex cable and the ground cable.

5.6 Replacing the Laser Board

1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Disconnect the cables from the laser board.



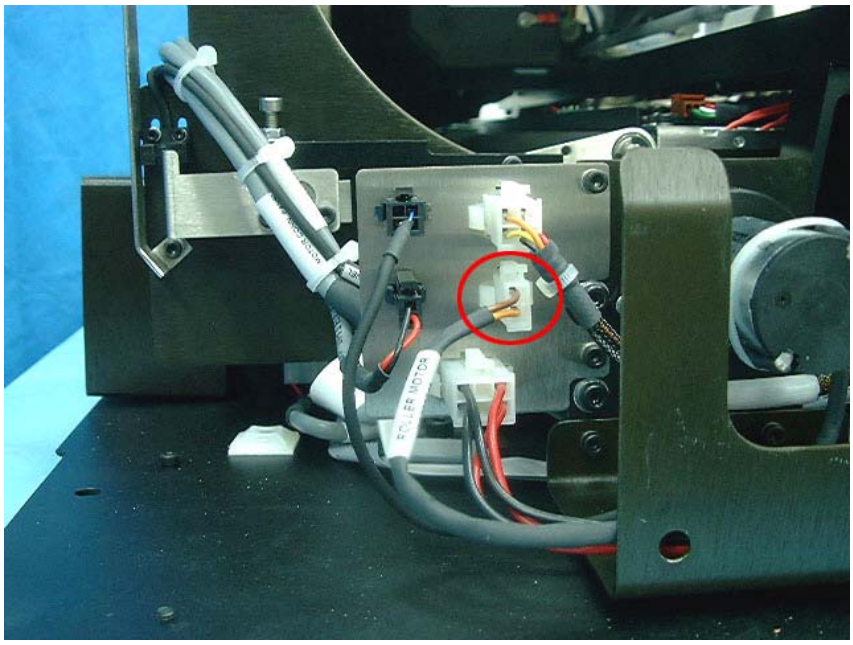
3. Open the three 3.0mm Allen screws, and remove the Laser Board.



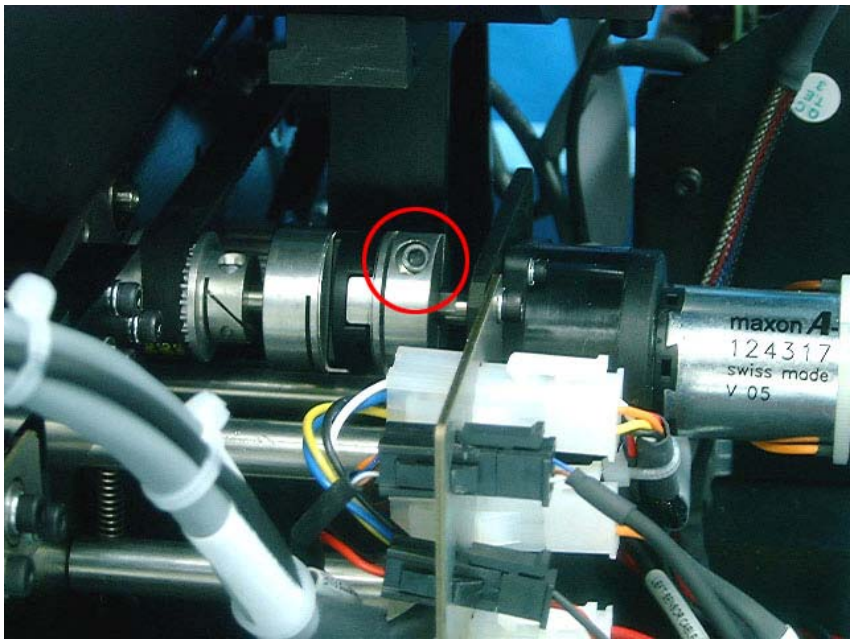
4. Put back the new Laser Board and secure with the screws.
5. Connect the wires to the Laser Board.

5.7 Replacing the Roller Motor

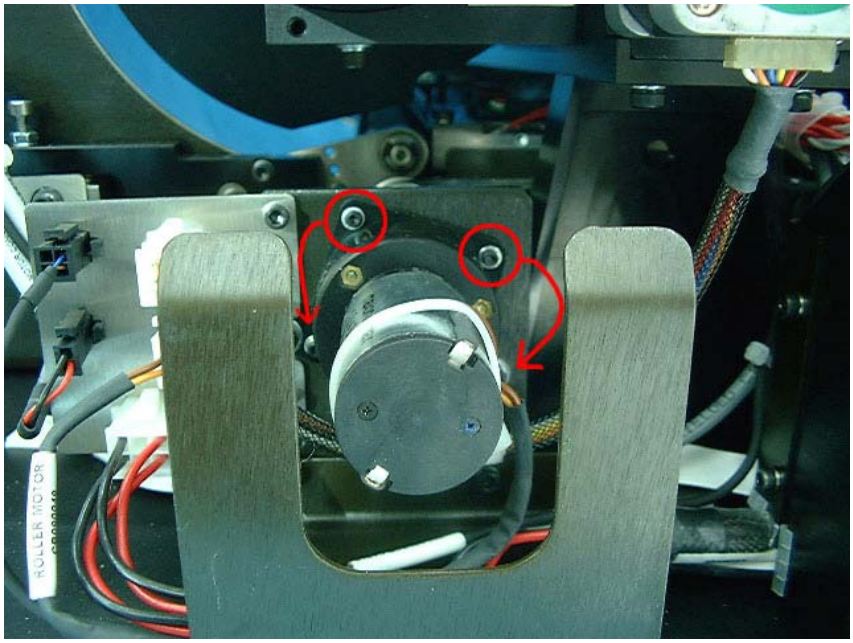
1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Disconnect the Roller Motor Cable from the connector panel.



3. Open the 3.0mm Rollers Coupling Allen screw.



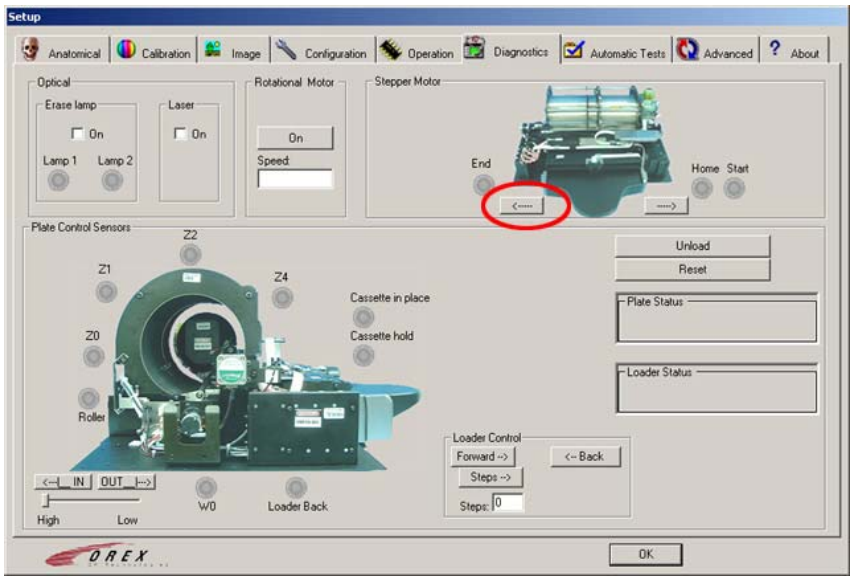
4. Open the four 2.0mm Allen screws that attach the Roller Motor to its place.



5. Pull out the motor, and hold the coupling parts.
6. Insert the new motor into its place, while re-fitting the coupling parts onto the motor axis (see figure in Step 3)
7. Close back the four Allen screws that attach the motor to the system.
8. Connect the Motor Cable to the connector on the Connectors Panel.

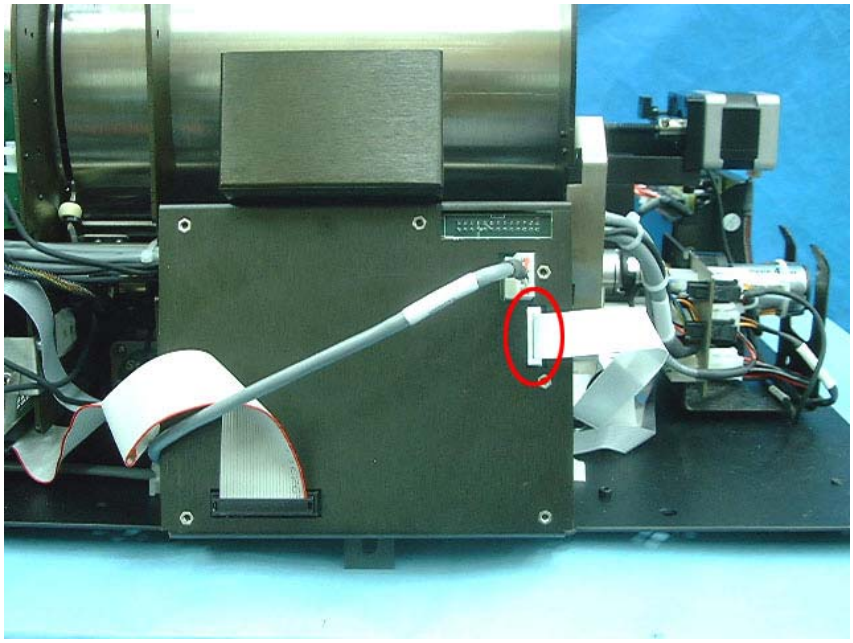
5.8 Replacing the Slide

1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Using the Scanner Interface Diagnostic screen, move the Optical Head to the middle of the drum.

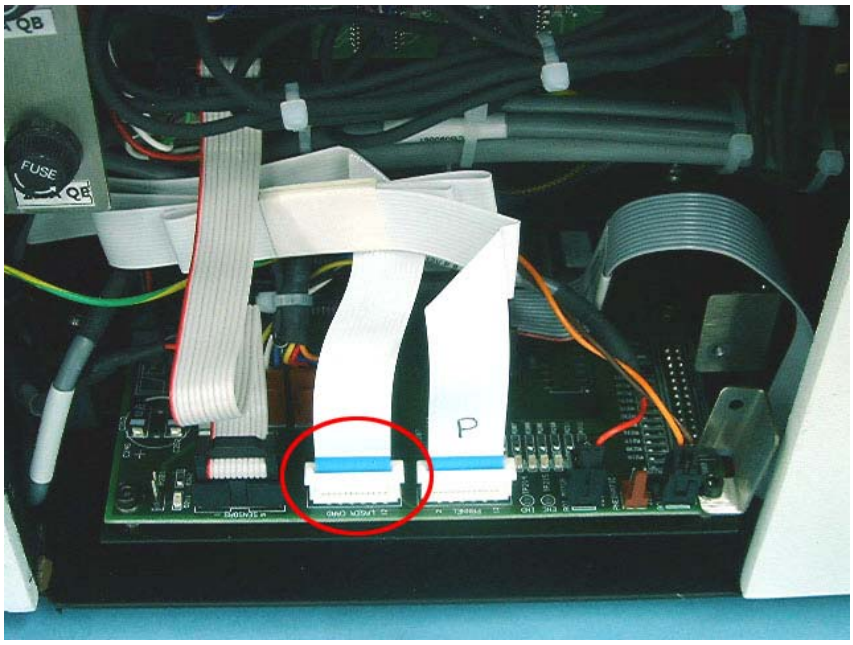


Cables

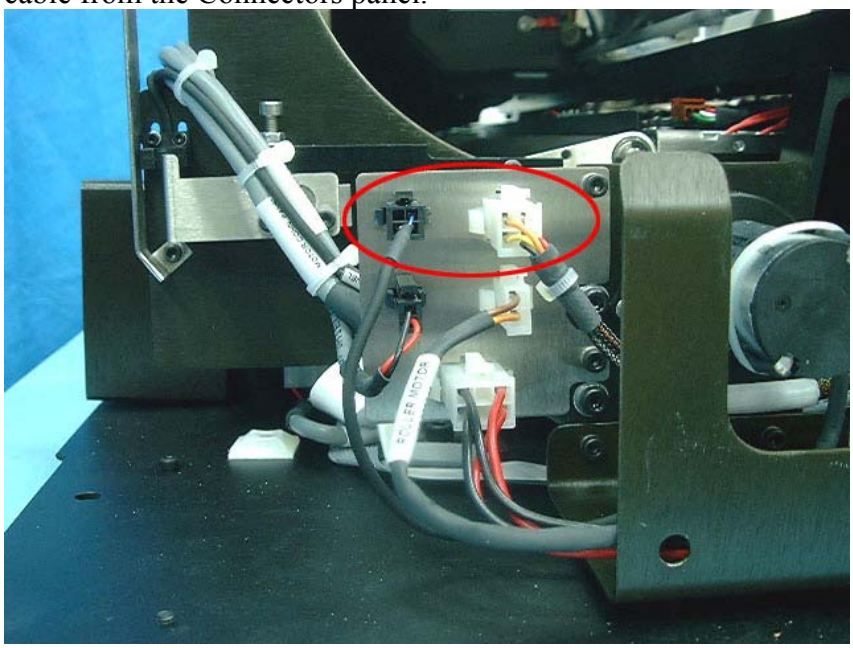
3. Disconnect the flex cable from the USB board.



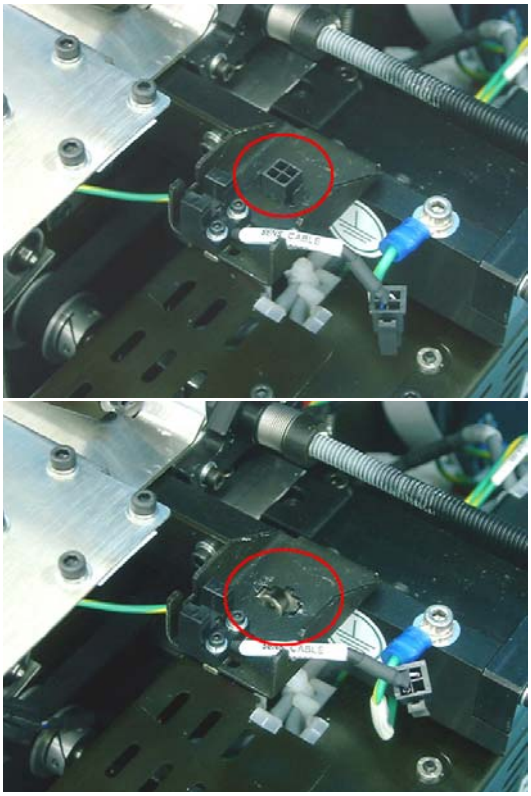
4. Disconnect the Laser Card flex cable from the Motion Board.



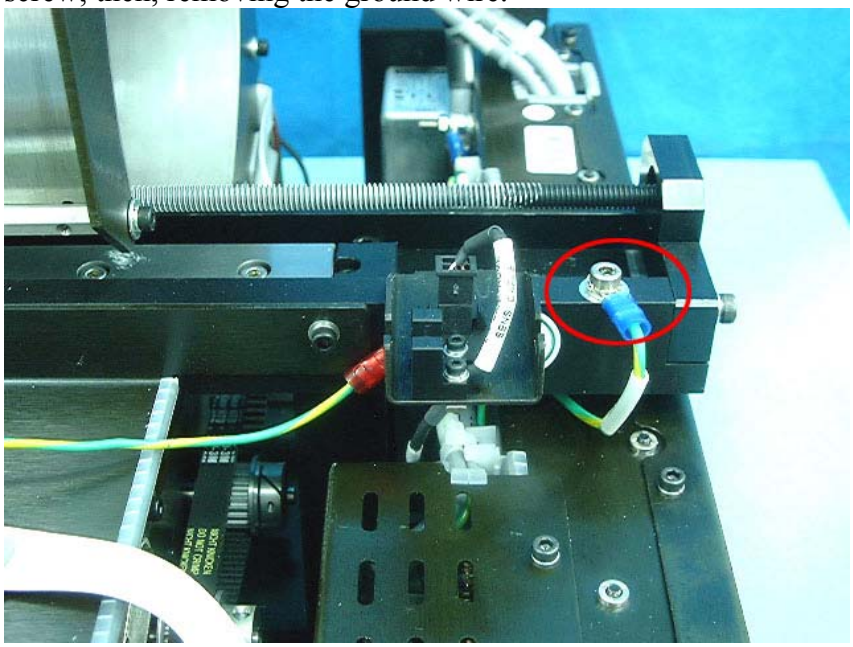
5. Release the two flex cables, until it can be freely taken out of the system together with the slide.
6. Disconnect the slide Step Motor cable and the left Origin Sensor cable from the Connectors panel.



7. Disconnect the right Origin Sensor cable from its connector and remove the connector from its bracket.

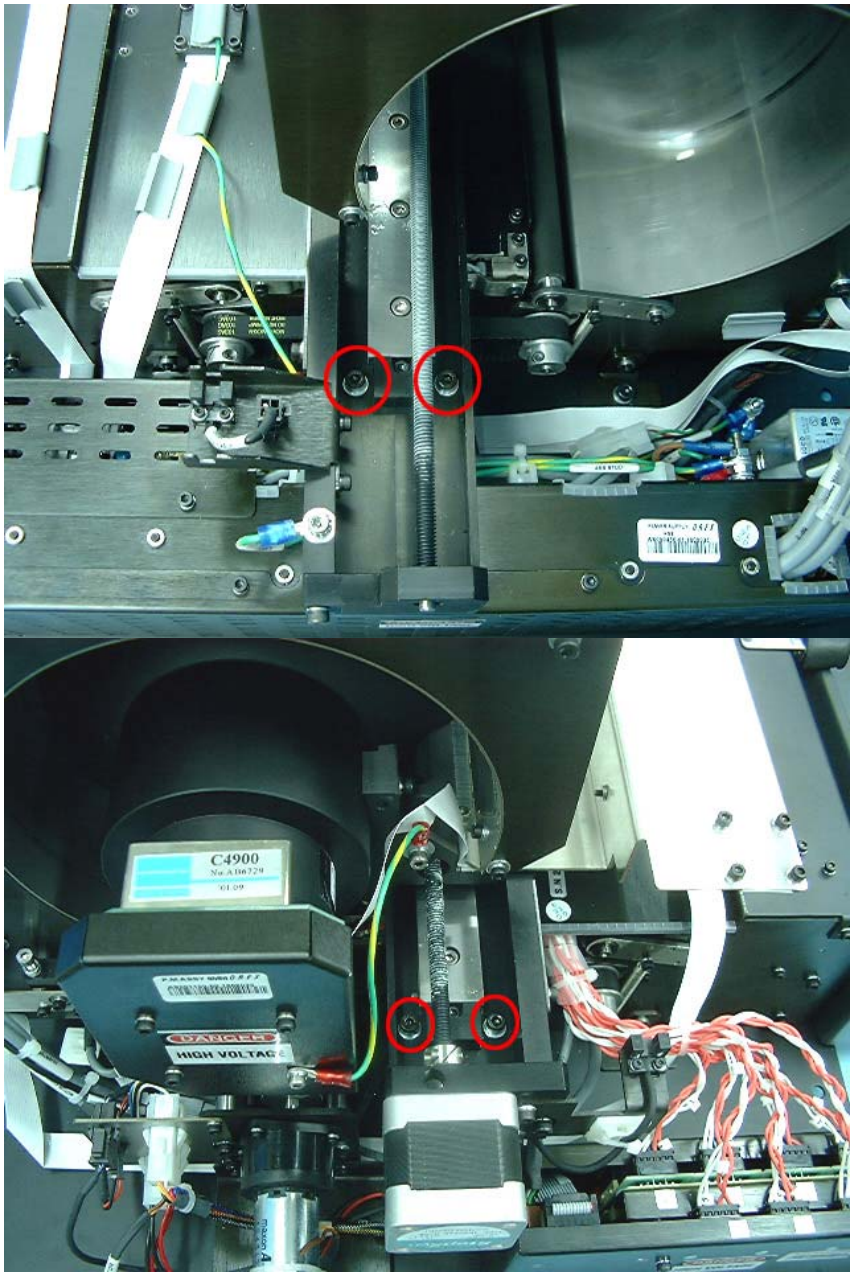


8. Disconnect the ground wire from the slide, by opening the Allen screw; then, removing the ground wire.



Slide

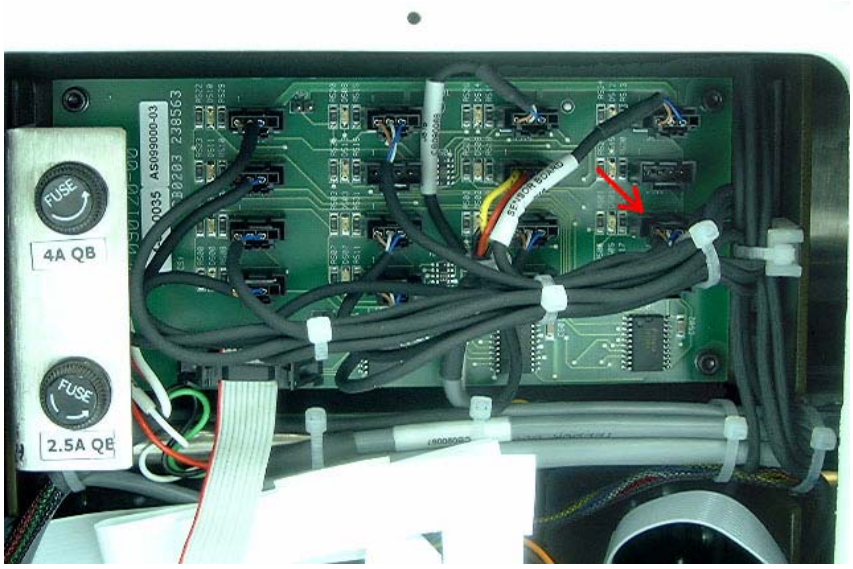
9. Open the four 4.0mm Allen screws holding the Slide Assembly to the system (two on each side of the slide), and remove the screws from the slide.



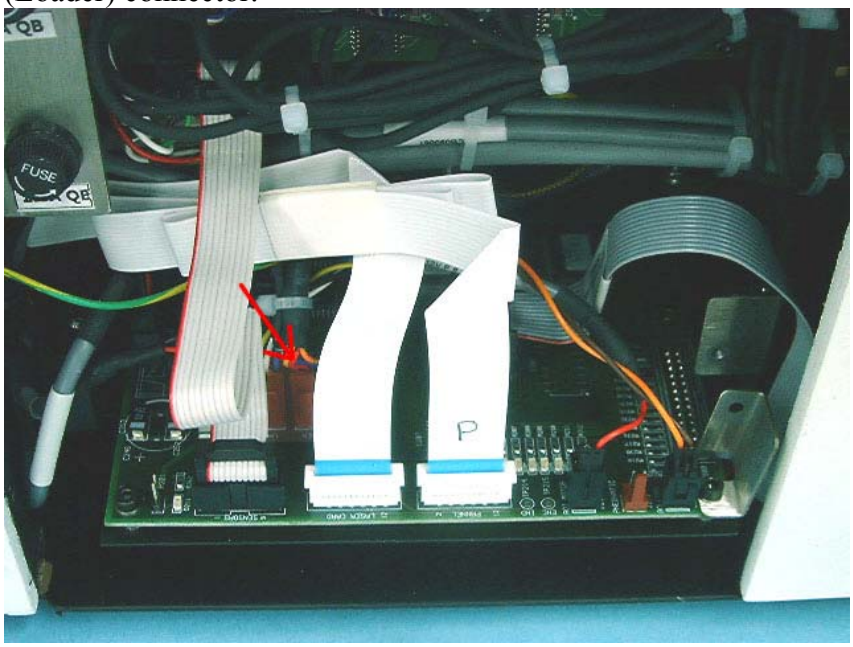
10. Remove the slide from the system by pulling it to the left, until it is out of the drum.
    While pulling it out, pay attention to the location of the flex cables.
11. Return the slide assembly by reversing the removal instructions.

5.9 Replacing the Step motor Carriage

1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Disconnect connector J505 on the Sensors Board; make sure that the wire is free.

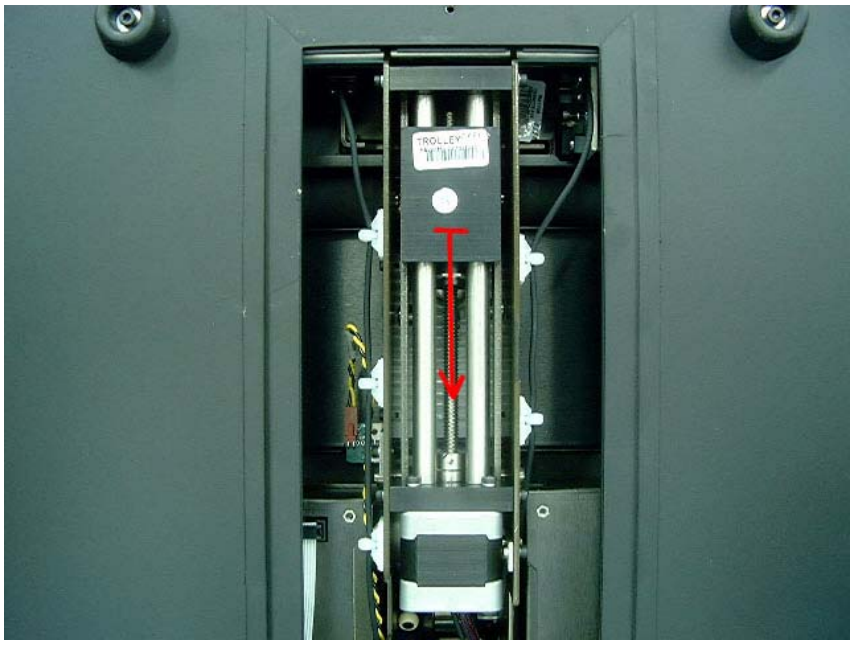


3. Disconnect the Step Motor Cable from the Motion Board J204 (Loader) connector.

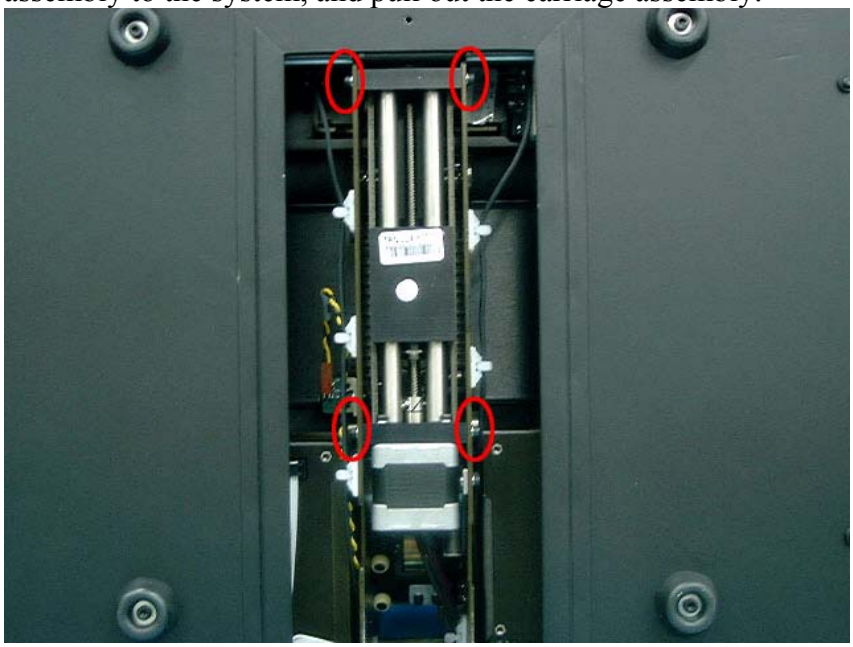


4. Place the system on its back, and open the door on the bottom.

5. Pull the carriage down.



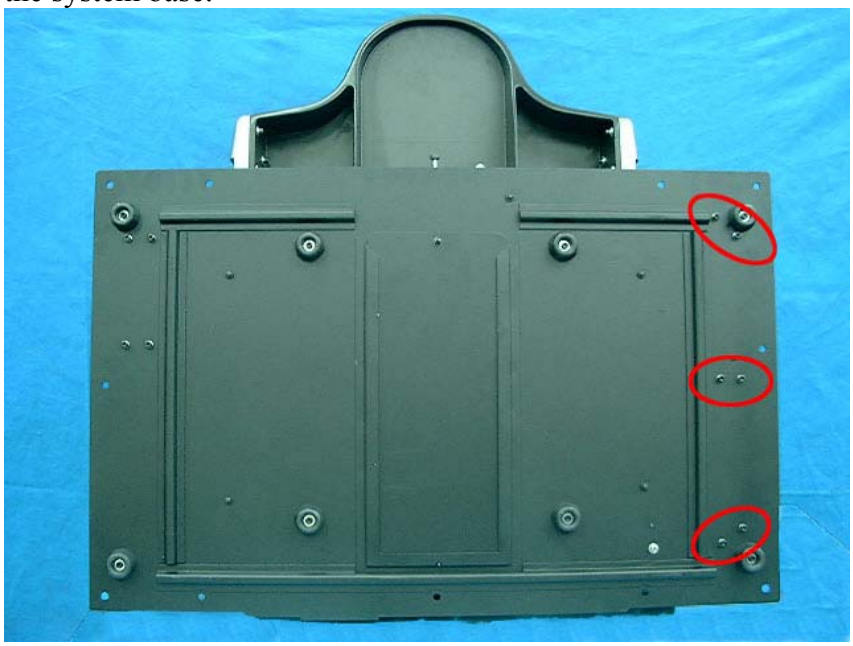
6. Open the four 3.0 mm Allen screws attaching the carriage assembly to the system, and pull out the carriage assembly.



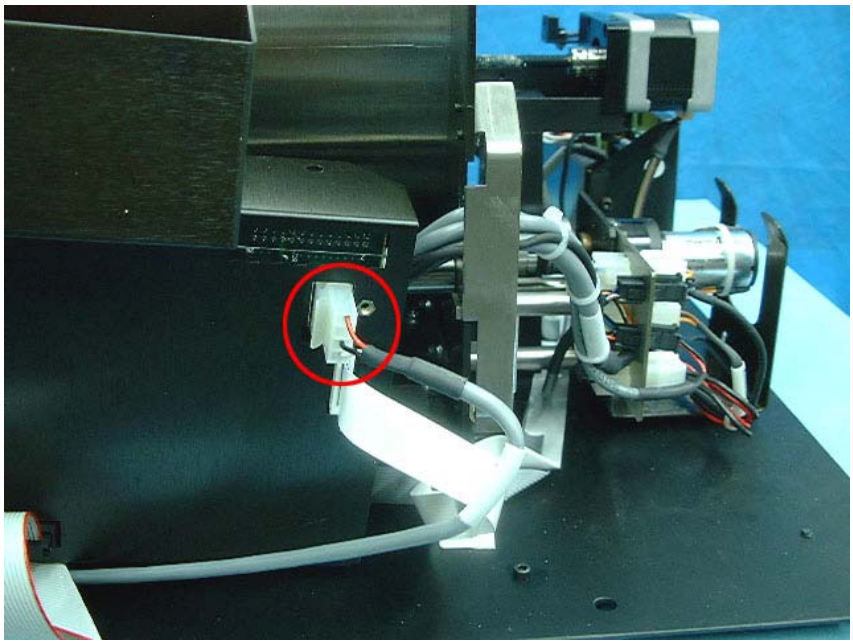
7. Put the new assembly in the system, and secure with the screws.
8. Close the bottom door, and secure with the Philips screw.
9. Connect the cables to the Motion and to the Sensors Board.

5.10 Replacing the Power Supply Assembly

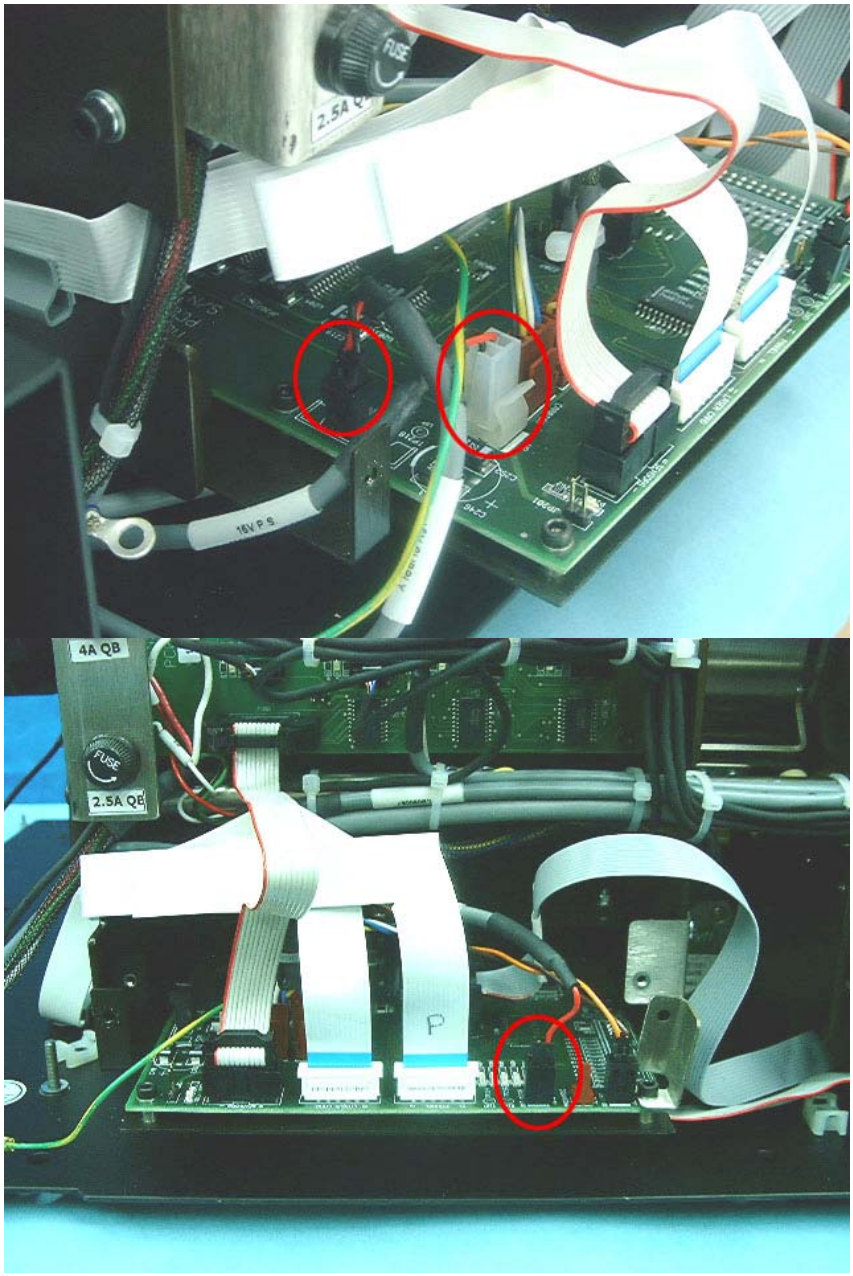
1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Pull the system to the right edge of the table, and open the six 3.5mm Allen screws that attach the Power Supply assembly to the system base.



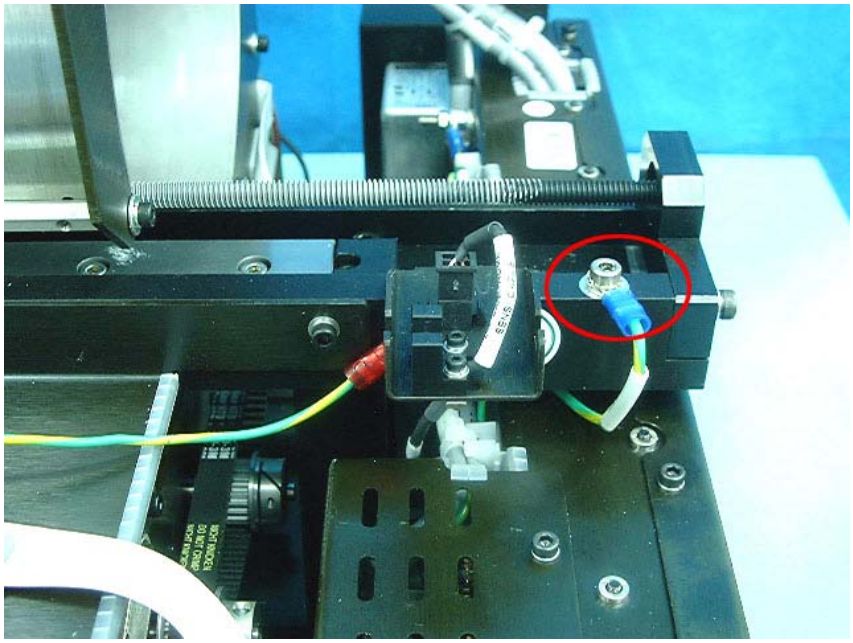
3. Disconnect the power cable from the USB board.



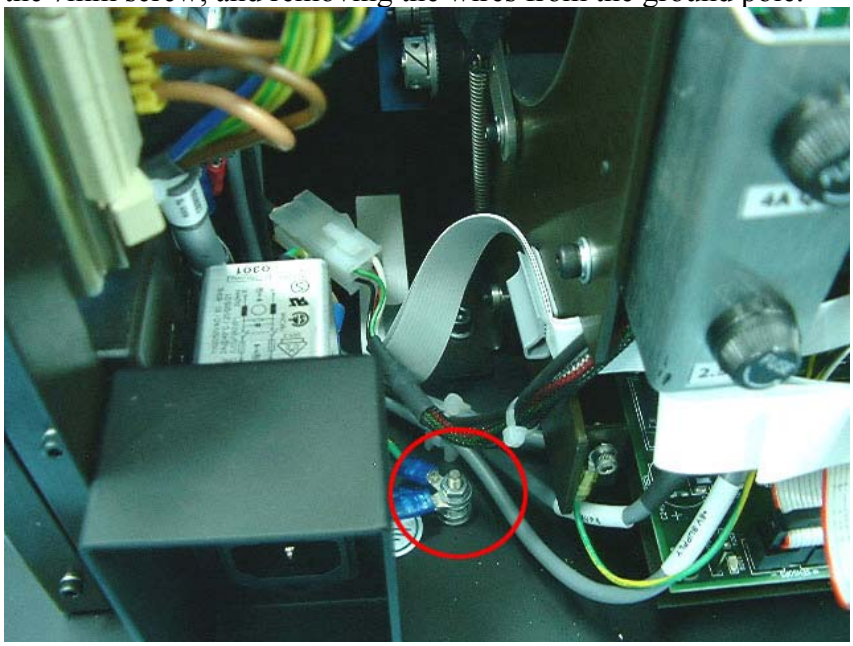
4. Disconnect connectors J213, J211 and U211 from the Motion Board.



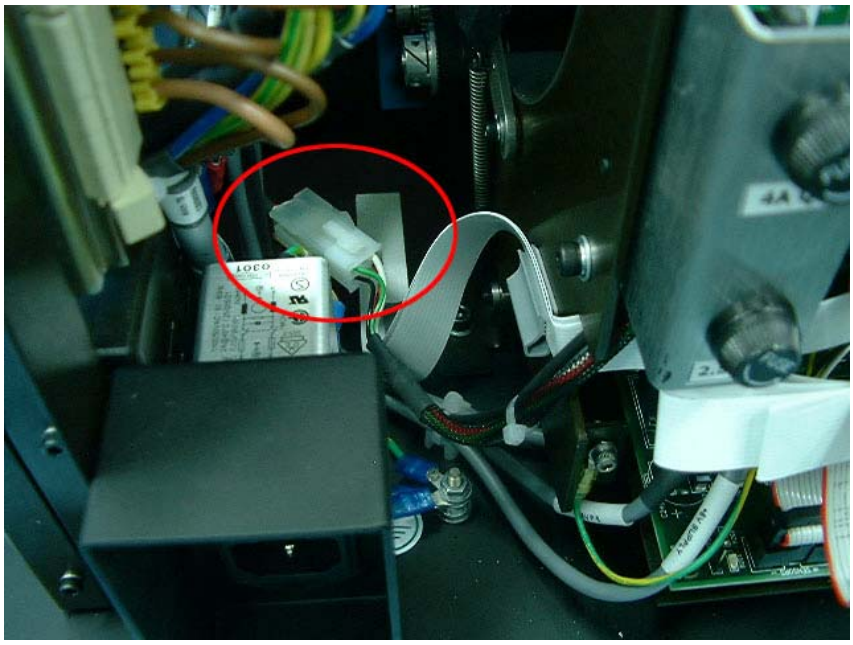
5. Disconnect the ground wire from the slide, by opening the 3.5mm Allen screw.



6. Disconnect the main ground wires from the system, by opening the 7mm screw, and removing the wires from the ground pole.



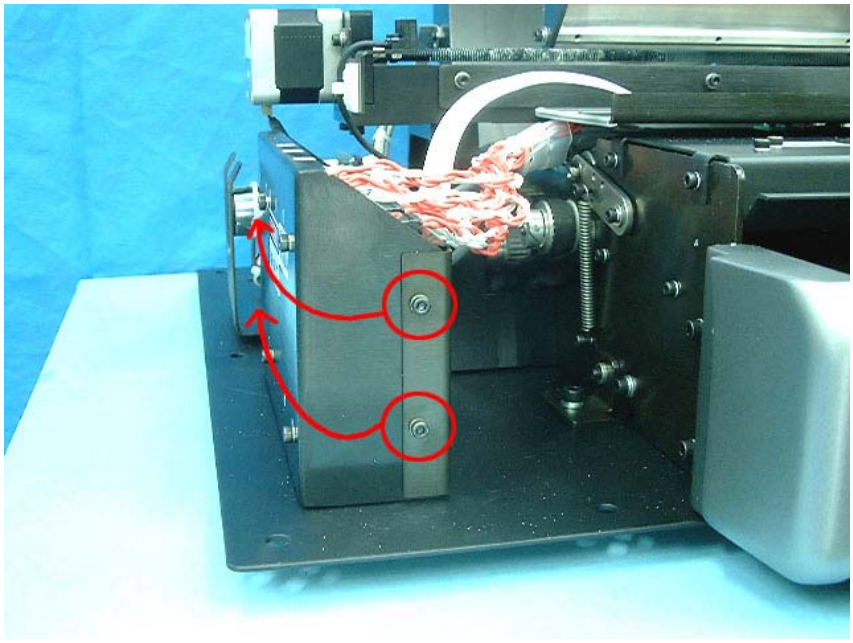
7. Disconnect the fuses connector.



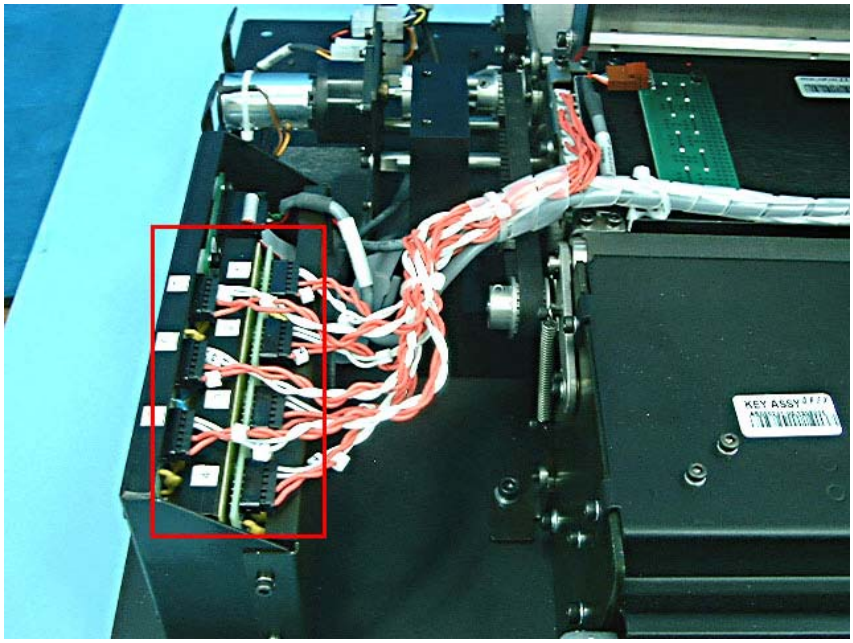
8. Remove the Power Supply assembly and install the new one; reconnect the connectors by reversing the disconnection order.

5.11 Replacing the Erase lamps inverters

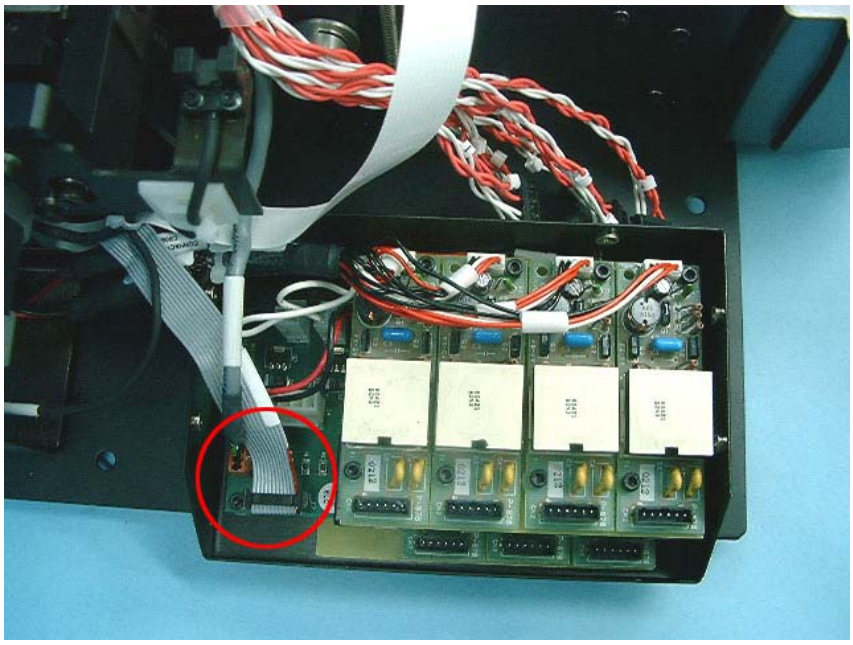
1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Open the four screws attaching the Inverter Cover to the system.



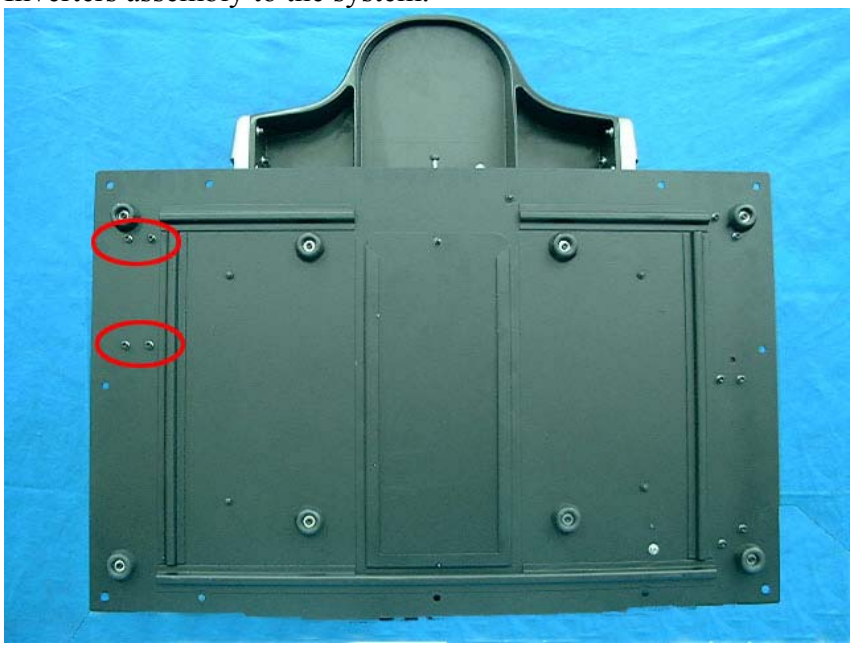
3. Disconnect the Erase Lamps connectors from the Inverters.



4. Disconnect the cables from the Erase Lamp Board.



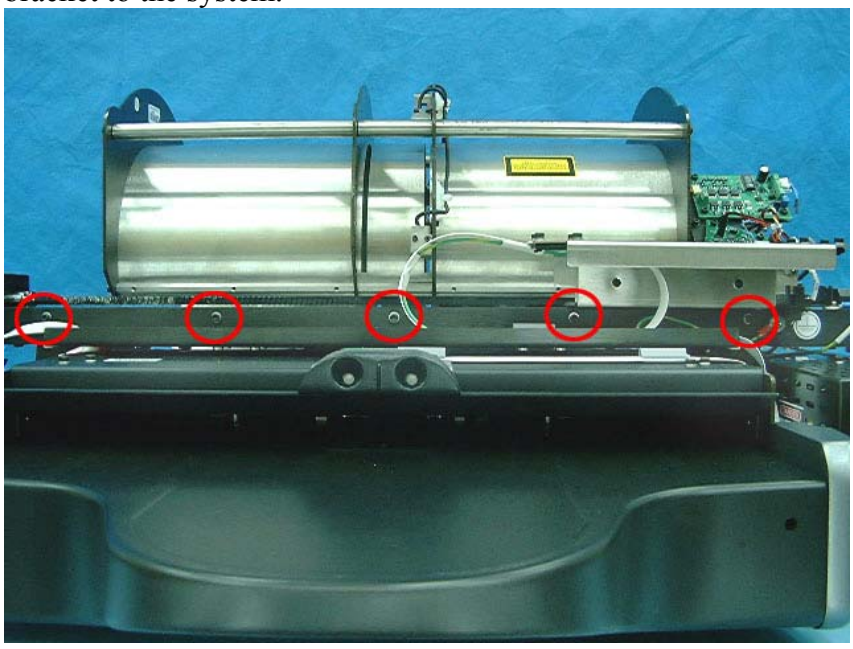
5. Open the screws at the bottom of the system, attaching the Inverters assembly to the system.



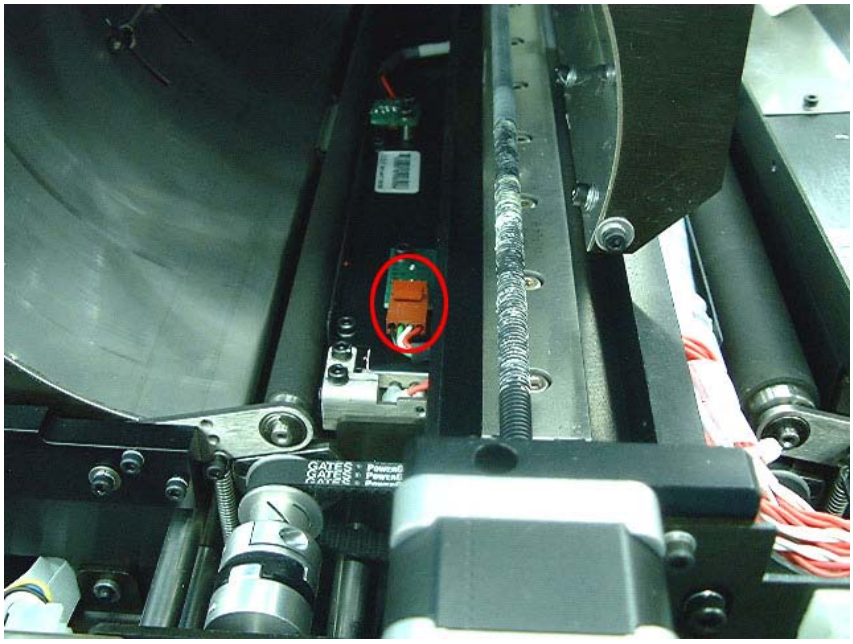
6. Remove the inverters assembly, connect the new one to the system and reconnect the cables.

5.12 Replacing the Erase Lamps Sensors

1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Open the five 3.0mm Allen screws that attach the flex cables bracket to the system.



3. Disconnect the cable from the Erase Lamps Sensor.

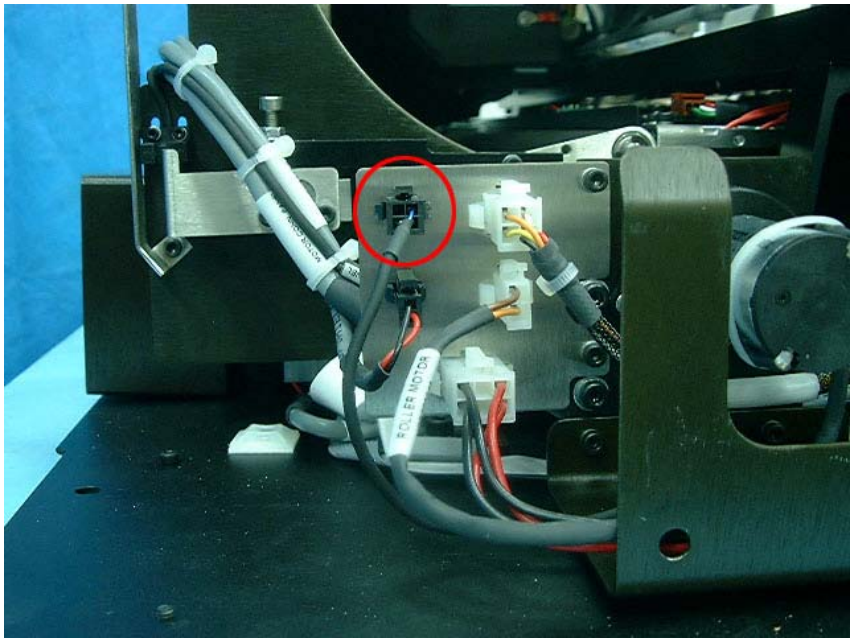


4. Open the two 3.0mm Allen screws, and remove the Sensor.

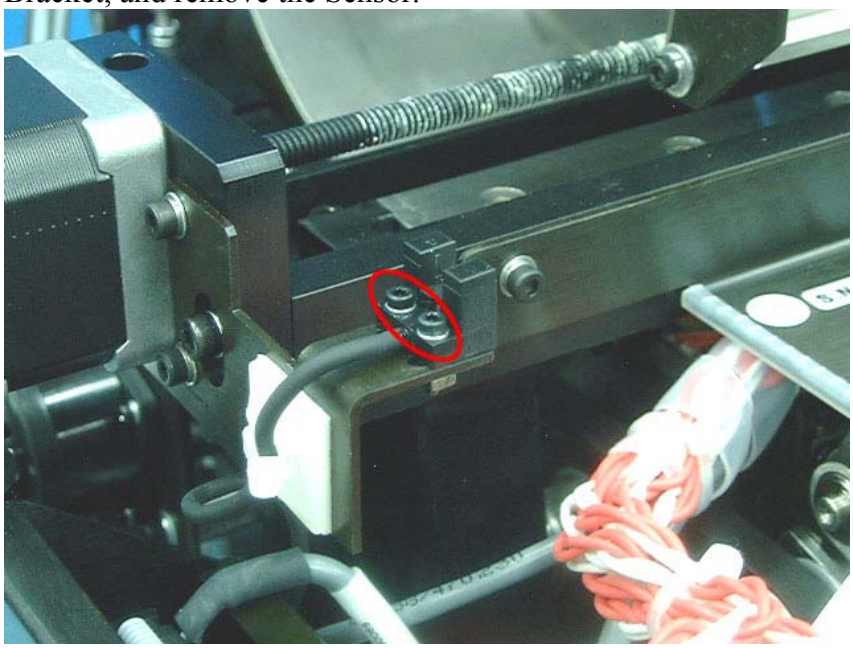
5. Install the new Sensor, secure with the Allen screws, and connect with the connector.

5.13 Replacing the Left Origin Sensor

1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Disconnect the Sensor cable from the Connectors Panel.



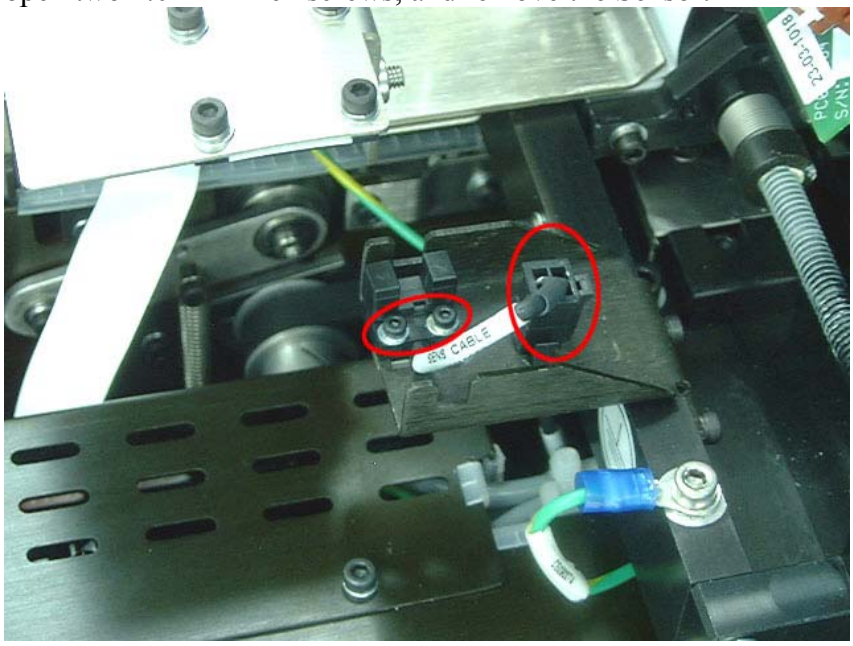
3. Mark the location of the sensor.
   Open two 2.0mm Allen screws attaching the Sensor to the Sensor Bracket, and remove the Sensor.



4. Install the new Sensor, by the marking of the old one, and secure with the Allen screws.
5. Connect the Sensor Cable to the connector on the connector panel.

5.14 Replacing the Right Origin Sensor

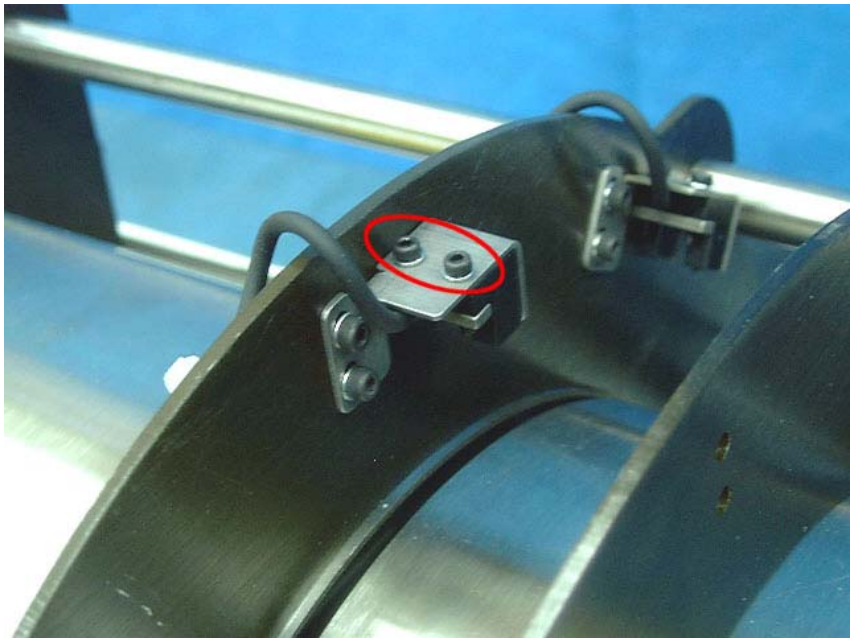
1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Move the Optical Head a few centimeters to the left.
3. Mark the position of the sensor on the sensor bracket.
4. Disconnect the cable from the connector on the Sensor Bracket, open two 2.0mm Allen screws, and remove the Sensor.



5. Install the new Sensor, by placing it on the marking, and secure with the screws.
6. Connect the Sensor Cable to the connector.

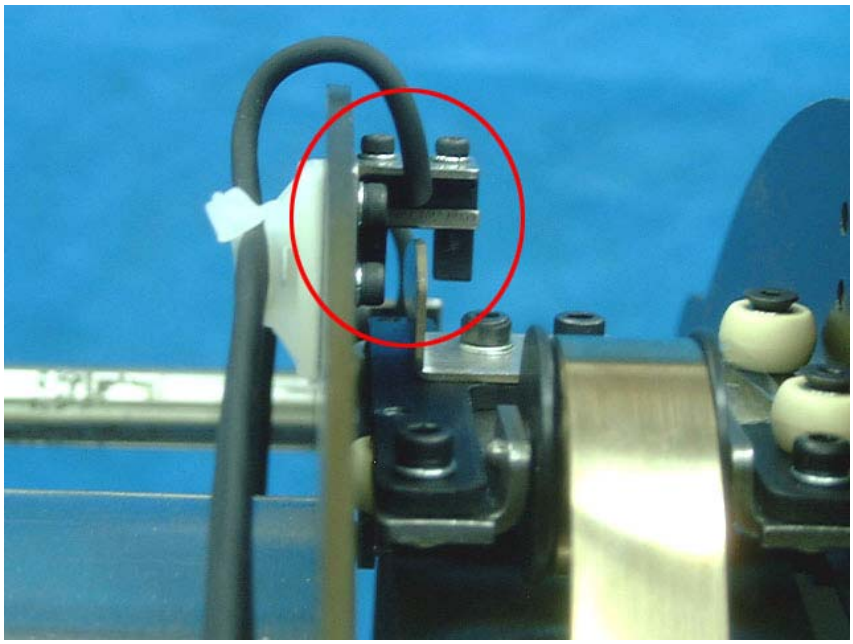
5.15 Replacing the Plate Size Sensor

1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Locate the Sensor and open its two Allen screws.



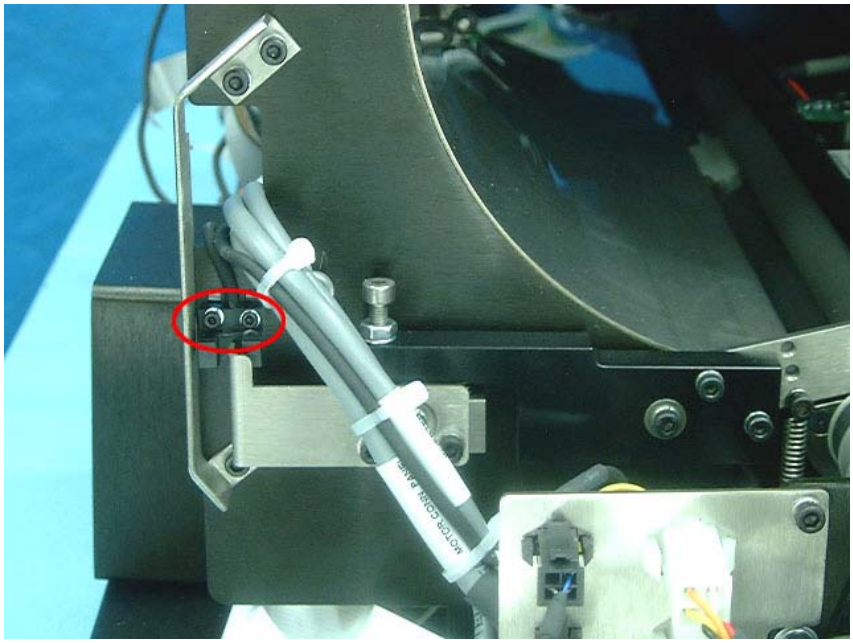
3. Cut the tie-wraps that route the sensor cable, and follow the cable up to the Sensor Board. Disconnect the cable from the Sensor Board.
4. Connect the new Sensor to the Sensor Board, and route the Sensor cable to the appropriate location on the system, using tie-wraps.

5. Secure the Sensor to its location, using the Allen screws; make sure that the Plate Guide Carriage moves smoothly under the new Sensor.



5.16 Replacing the Rollers Sensor

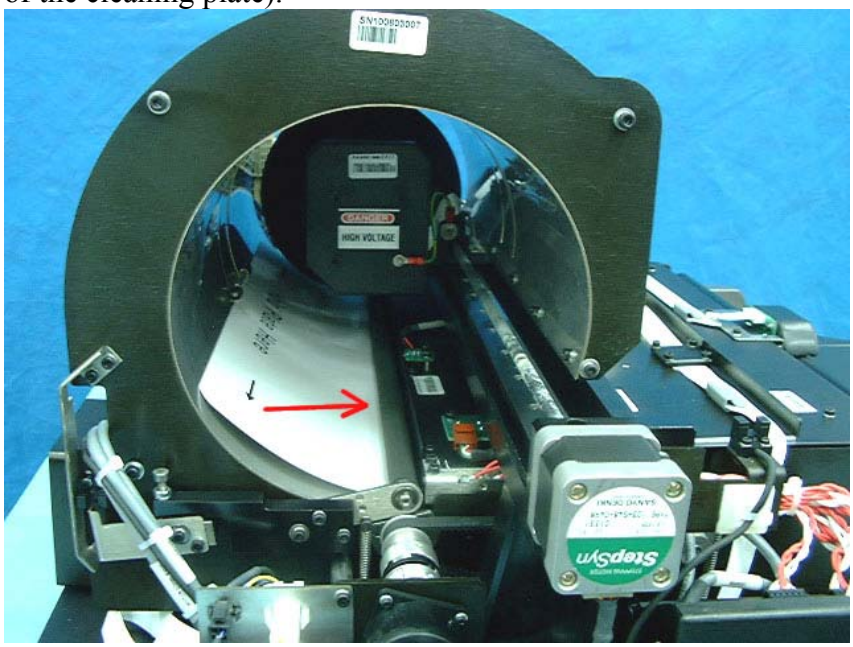
1. Remove the cover. Refer to Section 5.1.1, page 37.
2. Mark the position of the Sensor in the system.
3. Open the two Allen screws, attaching the Sensor to the system, and remove the Sensor.



4. Disconnect the Sensor Cable J509 from the Sensor Board.
5. Connect the new Sensor Cable.
6. Secure the new Sensor to its location on the system, according to the markings on the old Sensor.

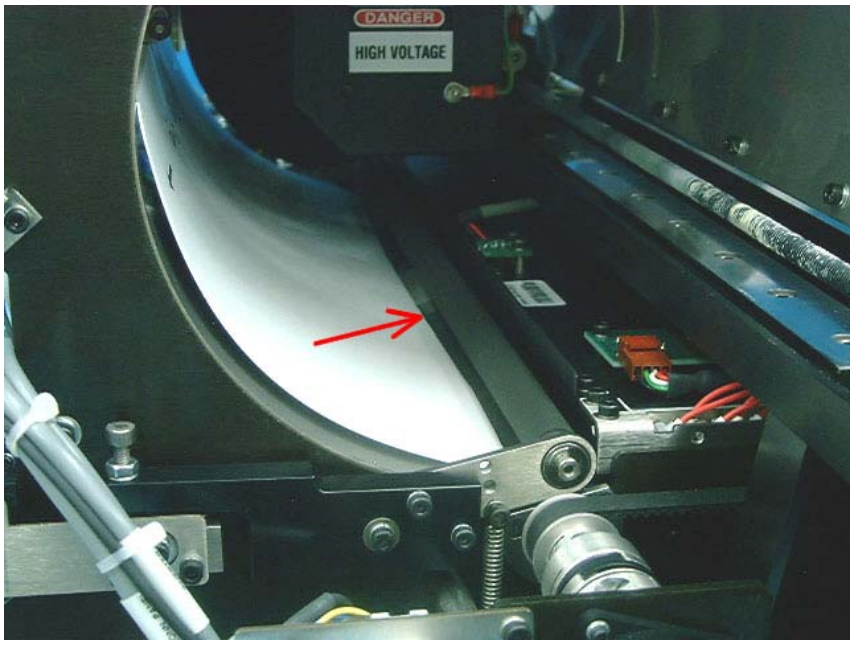
Verifying the correct position of the sensor

7. Turn on the system and wait until the initialization process is complete.
8. Insert a demo plate between the Rollers (it can be the plastic part of the cleaning plate).

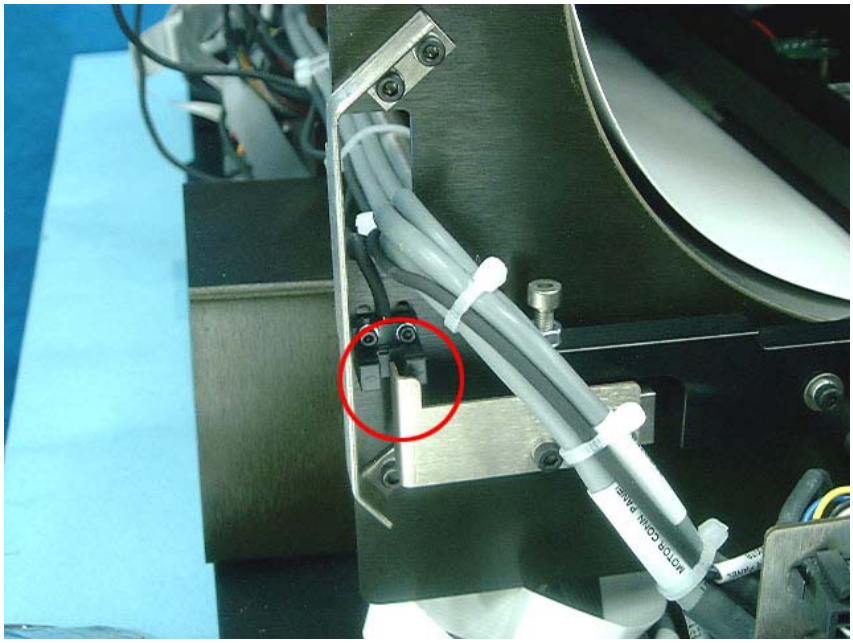


9. Verify that the Rollers Sensor is open – use the red LED indicator in the sensor.

10. Remove the demo plate from the Rollers.



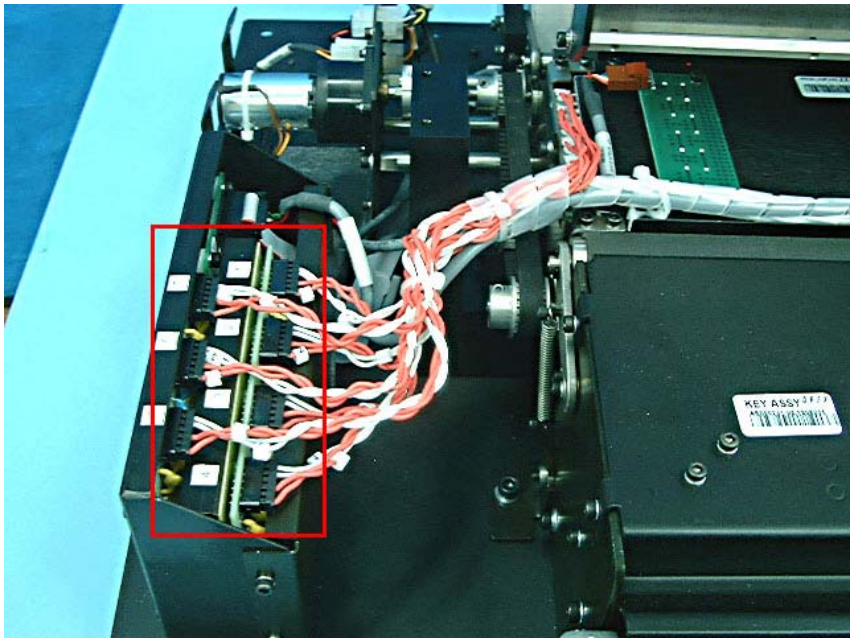
11. Verify that the Rollers Sensor is closed – red LED in the sensor is off.



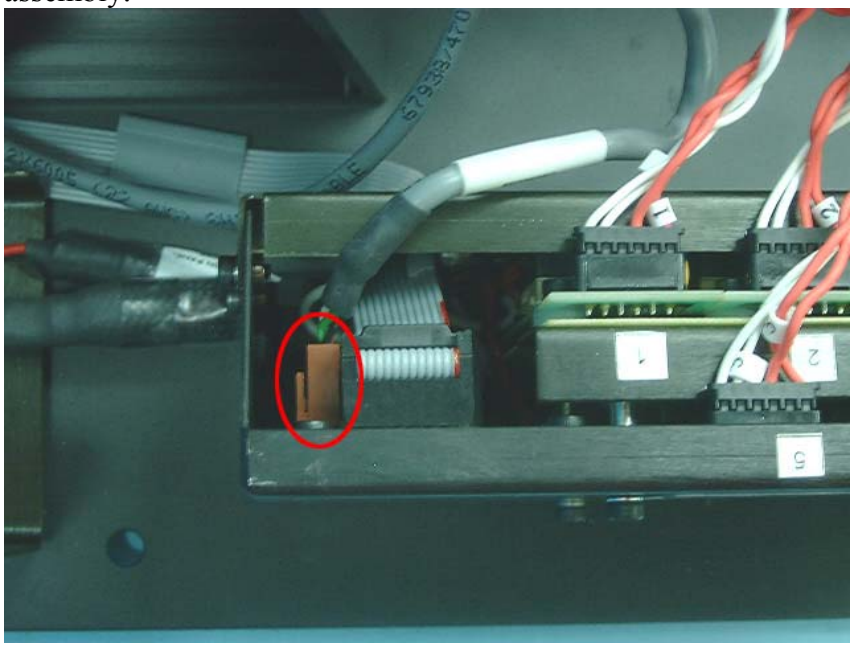
12. If one of the Position Sensors in the Rollers is not indicating the correct position, adjust its location until it indicates the correct position.
13. Remove the demo plate from the system.
14. Turn off the system, and place the Cover after the sensors are adjusted.

5.17 Replacing the Erase Lamps

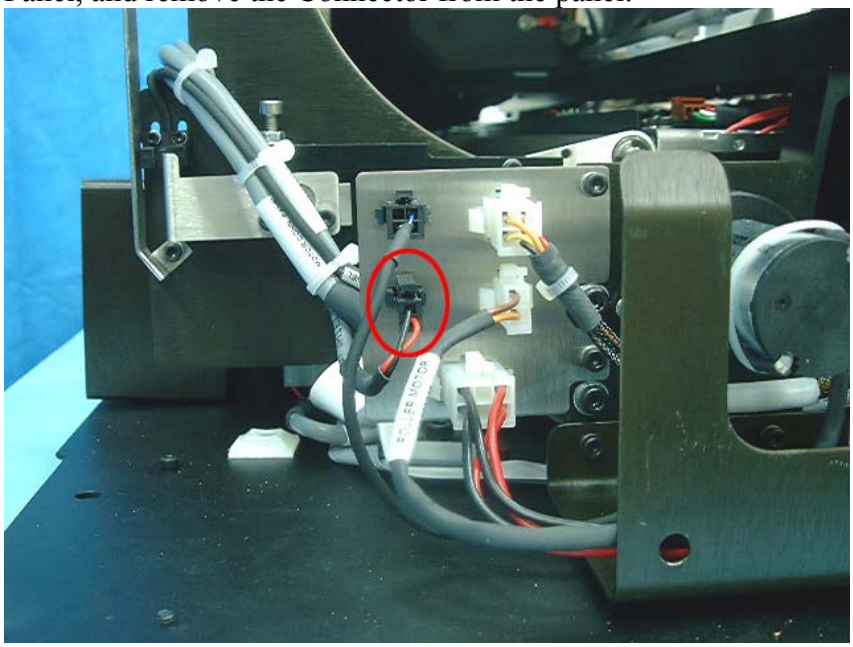
1. Remove the slide as described in Section 5.8, page 47.
2. Disconnect the Lamps Cables from the Inverters.



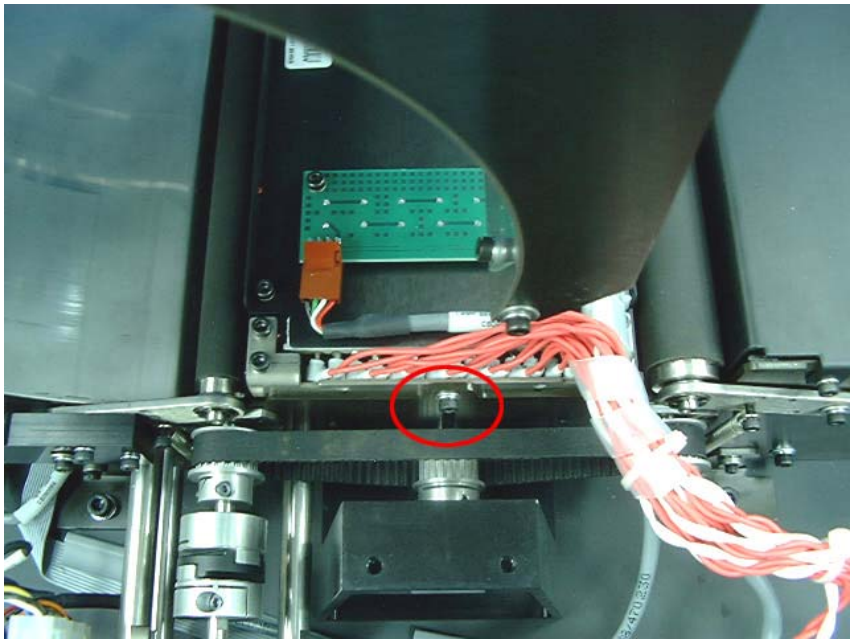
3. Disconnect the Erase Lamps Sensor Cable from the Inverters assembly.

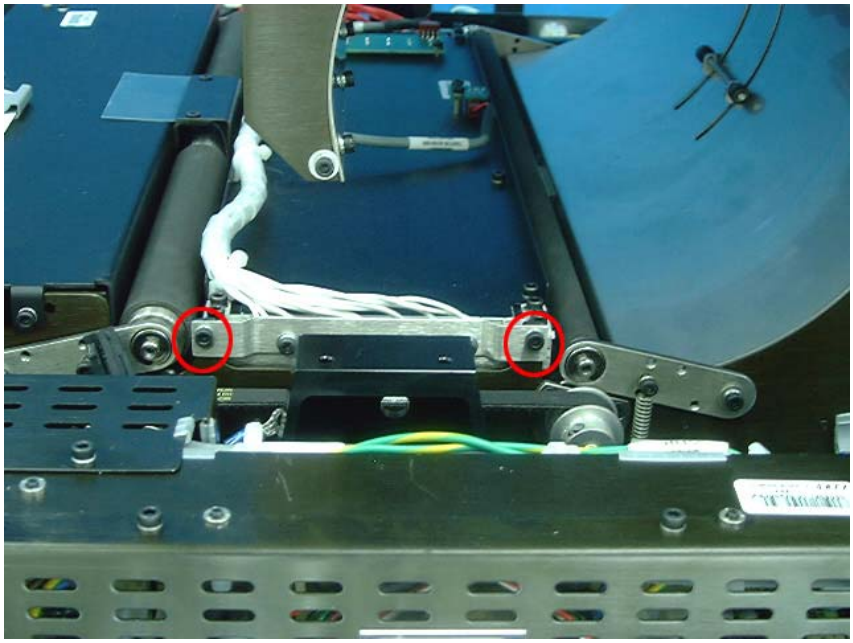


4. Disconnect the W0 upper sensor cable from the Connectors Panel, and remove the Connector from the panel.

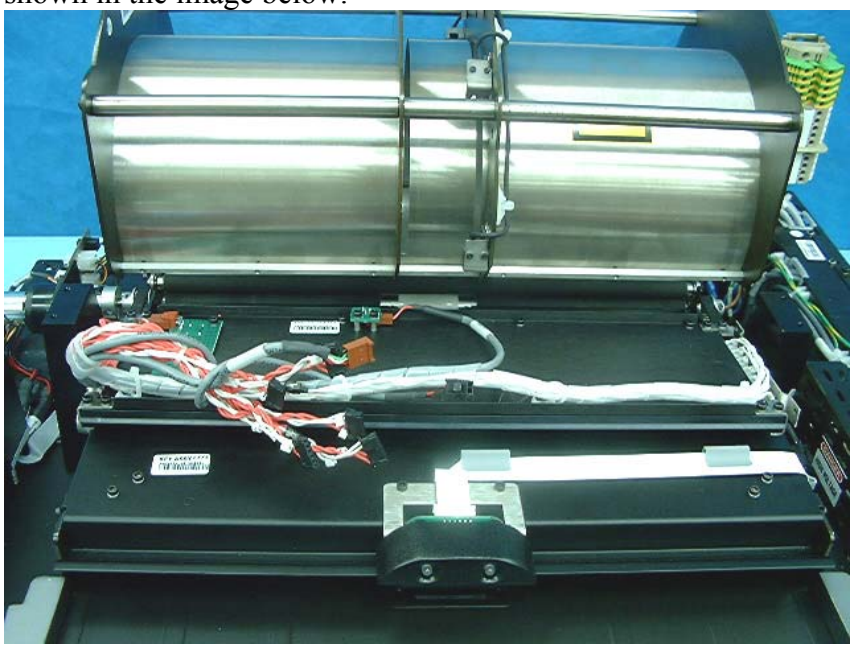


5. Open the screws that attach the Erase Lamps assembly to the system – two screws on the left side, and one screw on the right side.





6. Remove the Erase Lamps assembly through the Drum front opening; the Erase Lamps assembly includes all the wiring, as shown in the image below.



7. Install the new Erase Lamps assembly, and connect it to the system. Follow the removal instructions in reverse order.

6. Appendix A: Service Report

SERVICE REPORT

Reporting distributor:

Company name:		
Technician servicing the PcCr 1417:	Name:	
	Tee. No.:	
	e-mail:	

System information:

System SN:	
Problem reported:	
Problem diagnosis	
Repair activity:	

Result:

Name: _____ signature: _____